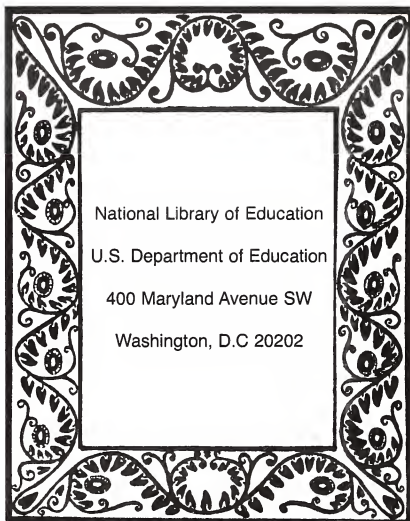
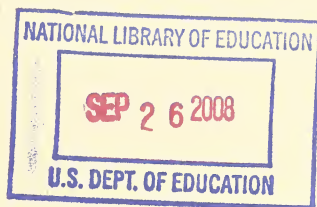


W. Vance Grant

Room 3055
1970, 1971







ANNUAL REPORT

OF THE

SECRETARY OF THE INTERIOR

FOR THE

FISCAL YEAR ENDING JUNE 30, 1890.

IN FIVE VOLUMES.

VOLUME V—IN TWO PARTS.
PART 1.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1893.

THE UNITED STATES
BUREAU OF EDUCATION.

*Created as a Department March 2, 1867.
Made an Office of the Interior Department July 1, 1869.*

COMMISSIONERS.

HENRY BARNARD, LL. D.,
March 14, 1867, to March 15, 1870.

JOHN EATON, PH. D., LL. D.,
March 16, 1870, to August 5, 1886.

NATHANIEL H. R. DAWSON, L. H. D.,
August 6, 1886, to September 3, 1889.

WILLIAM T. HARRIS, LL. D.,
September 12, 1889, to date.

CANCELLED

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REPORT OF COMMISSIONER OF EDUCATION.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C., January 1, 1892.

SIR: I have the honor to submit herewith my second annual report for the year ending June 30, 1890.

GENERAL STATISTICS.*

The total number of pupils enrolled in the schools of all grades, public and private, in all the States for the year ending June 30, 1890, is 14,512,778, the same being an increase of 786,204, or 5.73 per cent, over the previous year. This number is not inclusive of attendance on evening schools, and many other kinds of schools of a special character (enumerated in a note on page 1), which, in the aggregate, amount to some 300,000 pupils, and increase the total to about 14,800,000.

Of these, 96½ per cent are reported as receiving elementary instruction only—that is to say, only an average of 3½ in 100 pupils in the schools during the year were studying any branches above the course of study laid down for the first eight years (6 to 14).

One pupil in forty was under secondary instruction, *i. e.*, in the course of study prescribed for ninth to the twelfth year's work—say 14 to 18 years of age.

One pupil in one hundred and seven was under superior instruction (colleges, universities, and equivalent grades of work arranged for pupils in their thirteenth to sixteenth years' work, and aged from 19 to 22 years).

Reducing these items to an absolute standard by comparing them with the whole population, we see—

	Per cent.
Population in school	23.18
Population under elementary instruction	22.37
Population under secondary instruction	0.58
Population under superior instruction	0.22

* See chapter I, pp. 1-37, prepared by Mr. F. E. Upton.

LENGTH OF SCHOOL YEAR.

The school term varies in localities, the average number of days for the whole country being 134.3 days, the average for the

	Days.
North Atlantic division being	166.6
South Atlantic division	97.2
South Central division	88.1
North Central division	147.9
Western division	135.1

The divisions containing numerous cities have an advantage in the length of school term over the sparsely settled regions devoted to agriculture. The cities North, South, East, and West with considerable uniformity hold annual school sessions of nearly two hundred days, while the populations outside of cities and villages hold a three months' school in the winter and possibly a shorter session in the summer, except in those States that fix by law a minimum session of greater length.

ACTUAL AVERAGE AMOUNT OF SCHOOLING RECEIVED BY THE ENTIRE POPULATION.

From the annual returns, showing entire number enrolled and their average attendance in days, it is easy to tell what is the actual average amount of schooling received by the entire population of a given State or of the whole country.

With the present percentage of attendance and length of school term each person in the United States, on an average, will receive four and three-tenths years' schooling of two hundred days each, taking into consideration both public and private schools.

The several divisions compare in this respect as follows:

Schooling to each inhabitant:	Years.
North Atlantic division	5.89
South Atlantic division	2.52
South Central division	2.56
North Central division	5.15
Western division	4.40

Average for whole United States, 4.30.

There are four States that exceed six years to each inhabitant, namely:

	Years.
Massachusetts	6.86
New York	6.41
Connecticut	6.40
Ohio	6.20

When we consider that four years is the average time occupied in learning the branches in primary grades, occupying the first half of the course of study in elementary schools, we see how small is the average amount of instruction received in schools by the people of the country.

It suffices barely for learning how to read, to write, and to use numbers in the simplest processes; but taken in connection with the almost universal circulation of the daily newspaper, the matter does not seem so desperate, for the newspaper serves as a sort of continuing school and effects a slow and gradual progress among the people throughout life along lines of literary growth.

PUBLIC AND PRIVATE SCHOOLS.

Not quite one-eighth of the pupils are enrolled in private schools of all kinds. In the older and wealthier sections of the country the private schools reach an enrollment of nearly one-sixth of all the pupils; in the other sections the proportion falls as low in some cases as one-thirteenth in private schools.

EXPENDITURES.

The total amount raised for the support of common schools for the year 1889-90 was \$143,110,218, or an average of \$2.29 for each man, woman, and child in the nation, and \$17.22 for each pupil of the average in attendance on school.

EFFORTS IN THE SOUTH.

Although the shortness of the school term in the agricultural sections causes them to suffer in comparison with the sections containing the cities, yet the proportion of the population actually brought into school for longer or shorter periods each year shows great zeal in those communities. For the whole country the per cent of population enrolled in school some time in the year is 23.18. By divisions this varies as follows:

	Per cent of entire population.
North Atlantic division	21.50
South Atlantic division	21.68
South central division	23.49
North central division	25.48
Western division.....	19.11

The Southern States on the Atlantic coast enroll a larger proportion of the population in school than the States north of them. The Gulf States enroll a still larger proportion. But the Northern States of the Mississippi Valley and the Lake regions surpass all other sections in the proportion enrolled in school.

In my last report I showed that the sixteen Southern States had increased in thirteen years as follows in the enrollment on the common elementary schools:

	1876-77.	1888-89.
White pupils enrolled (increased 70 per cent).....	1,827,139	3,197,830
Colored pupils enrolled (increased 113 per cent)	571,506	1,213,692
Expenditures for both races (more than doubled).....	\$11,231,073	\$23,226,982

INTERNATIONAL EDUCATIONAL CONGRESS AT PARIS.

The report on the International Educational Congress, held at Paris, by Mr. W. H. Widgery,* together with his studies on the exhibition of educational material at the great exposition then in progress, will be read with more interest just now in connection with the preparations in progress for the Columbian Exposition at Chicago in 1893. (See Chapter II, pp. 41-143.)

*The death of Mr. William Henry Widgery, assistant master of University College School, London, which occurred March 26, 1891, deprives England of a teacher in whom great natural gifts were enhanced by the finest training and the highest ideals of his profession. The loss will be felt also in other countries, since in addition to his work as a teacher, Mr. Widgery had made contributions to the literature of his profession which had attracted wide attention. Indeed so marked were his abilities as a writer and lecturer on educational subjects, that it appeared as if the call for his life work would be rather in this field than in the more restricted limits of the school. In the latter service, however, his rare personal qualities found a congenial sphere. His energy and enthusiasm were contagious, his manly spirit won the respect of his boys which his sympathies deepened into love, while to his associate teachers he was a companion, genial, helpful, and inspiring. His teaching is said to have been "singularly interesting and clear." He brought his pupils face to face with principles and excited them to thinking. He was a great student of method, taking the most fruitful suggestions from the minds with which he was dealing, but he never allowed his teaching to degenerate into mechanical routine. English was his favorite subject and he managed to make it not only interesting, but disciplinary, disclosing in this work and in his pleading for a better study of phonetics truly original powers.

Mr. Widgery was born in Exeter, March 11, 1856, his father being a well-known artist of that city. He was a pupil in the Exeter Grammar School, in which he obtained a scholarship for St. John's College, Cambridge. He graduated in 1879 as seventh senior optime in the mathematical tripos, ill-health preventing his taking the higher mathematical honors. In 1880 he gained the Harness prize of his university for an essay on the first quarto of Shakespeare's Hamlet, a scholarly piece of work, which was favorably noticed in the Athenæum, and also in Anglia and the Englische Studien. He took the degree of M. A. in 1882, and the same year was offered the position which he held at the time of his death. In 1886 he studied for some time in Germany, giving his attention chiefly to comparative philology and modern languages.

The literary work which Mr. Widgery had accomplished was scanty, but of admirable quality. It comprised, in addition to the Cambridge essay, a short tract on the teaching of languages reprinted in 1890 from the Journal of Education (London), and an unfinished series of papers in the Modern Language Monthly on modern philology. The former has been favorably noticed in Germany, and is about to be translated into Swedish. These papers, with a few unsigned book reviews, complete the list of published matter. In 1889, Mr. Widgery gave up a much-needed holiday for the sake of visiting the educational section of the Paris Exhibition; here I met him, and at my request he undertook the preparation of a report on the educational department of the exposition.

Fortunately, although his increasing physical weakness retarded the report, it was virtually ready for print at the time of his death. The interest which his wide experience of educational system, his critical judgment, and his admirable style would naturally excite in the work will be deepened by the sad fact that it was the last effort of his life. The editing of the manuscript was kindly undertaken by Mr. Widgery's friend, Mr. Foster Watson.

The chief interest centered on the question regarding the position which Latin and Greek should occupy in the course of study. A great revolution is in progress in respect to the course of study for secondary schools, and the old time prominence of the classic languages is vigorously combatted. It was noticeable that the women teachers present in the congresses made a strong presentation of their side on all questions in which sex concerns education. France will follow the lead of England in making prominent the higher education of girls.

As a continuation and supplement to Mr. Widgery's report, I present (Chapter III, pp. 143-186) a translation* of the full report of the secondary congress, published by M. Dreyfus Brisac.

STUDIES ON FOREIGN EDUCATIONAL SYSTEMS.

In my last report I presented several studies on the educational systems of Europe, including those of Germany, France, England, Italy, Sweden, Finland, and Spain. The specialists of the Bureau have continued these studies, and I am able to offer in the present report a survey of the system of Scotland, together with an outline of the history of its development. (Chapters IV and V, pp. 187-236.)

The importance of Scotland to the world, and the great importance of its educational system as contributing to the rank which it holds in the world's history make this chapter of great interest. Macaulay has eloquently described the effect of the establishment of people's schools (p. 231, note 1).

The account of educational operations for the past year is prefaced by a brief survey of the entire system, designed to aid the reader to see the relation of the recent movements to what has gone before (Chapter VI). A similar brief statement has been prepared to show the educational system of France (Chapter VII), and make clear the record of recent educational events in that country.

A comparative study of London and Paris in their provisions for elementary education (Chapter VIII) follows.

Education in Germany has been further illustrated in the present report by studies on the middle schools, the private schools, and various sociological phases of Prussia, and a sketch of the schools of the kingdom of Saxony (Chapter IX).

An account of the celebrated school conference at Berlin in December, 1890, and a preliminary sketch of the system of higher schools of Prussia have been prepared for the Bureau by Mr. Thurber (Chapter X).

According to the plans arranged last year, each specialist, after working out his detailed statements of the school systems of the countries assigned to him, is to make two briefer statements, the second one being of the kind called "a bird's-eye view," and giving the barest outlines of the organization and history of education in those countries. This

* Prepared for the Bureau by Mr. J. J. Noah.

brief conspectus of its educational development should be prefixed to each yearly review of the current school events of a given country by way of explanation. The reader of the educational news of foreign countries usually finds it a profitless task, because he lacks a knowledge of the preceding events that have led to the present situation. The trend, whence and whither, is necessary for a clear idea of the significance of the current events reported.

In the present report are offered the first attempts at making brief statements of the educational systems of Prussia and Austria, in Chapters XII and XIII; and conspectuses of France, Austria, and Prussia are given in connection with the record of their school transactions for the past year. Noteworthy in the Prussian system is the compulsory attendance law, the dates 1717, 1763, 1806, and 1825 being important in its history. Other items of especial interest are (*a*) the high rate of attendance compared with the total number of different pupils enrolled during the year; (*b*) the large number in the secondary schools, amounting to 1.2 per cent of the whole population, or double the per cent of secondaries in the United States (0.58); (*c*) the small proportion of girls in the classical course of secondary and higher education; (*d*) the large proportion of men teachers; and (*e*) the pensioning of superannuated teachers. It must be noted that the terms "secondary" and "higher" or "superior" education do not have precisely the signification given them in the United States. One should subtract the number of students enrolled in the last two years of the course of study in a German gymnasium or in a French lycée and add it to the number enrolled in the university in order to get the aggregate of students in superior education for comparison with American enrollment in colleges and universities.*

Besides Scotland, Austria-Hungary, Norway, and Denmark have been studied, and the results presented in this report (Chapters XI, XIV, XV). In the Austria-Hungary system the point of interest is the reaction against the continual tendency to separation in thought and customs caused by diversity of languages. The tendency of the Hungarian to find his higher culture in science rather than in Latin and Greek is to be explained in part by the fact that the Hungarian literature does not, like the Germanic and Romanic literatures, derive its inspiration from the classic tongues.

* For the first time an attempt has been made by the Statistician to collect complete returns of the public high schools in the same manner as those of private academies and seminaries, and the statistics of the two classes of public and private secondary schools are so arranged that they may be used for future comparison; but, owing to the impossibility of securing the most accurate data of public secondary schools the first year, the results only are given without discussion, with the hope that the returns for another year will make it possible to give fairly complete results. This plan for the future will include reports of the students pursuing studies usually known as secondary in all these schools. See pages 1388 to 1485 of present report.

In Norway, as in Sweden, the attempt has been made to distinguish in the school laws between the urban and rural populations, and the results of this are worth the consideration of our own State superintendents.

In recent years there has been a vigorous effort in Sweden to give an industrial bent to the schools of the people, and this effort influences the school systems of all countries on its borders. The conquest of nature by productive industry in England and France has attracted the attention of the Scandinavian nations and Russia. In order to gain the coveted industrial advantages in the briefest time, various educational devices have been contrived, and the whole world finds useful pedagogic hints worthy of adopting in the Russian school shop and in the Swedish *slöjd* instruction. Denmark furnishes further lessons in the line of experiment with industrial branches, and also in its attempt to provide for two sets of pupils by one school building. But it seems strange that these northern countries have not yet adopted coeducation very extensively in the schools above the primary grades, when its great economy is considered.

COMPARATIVE EXHIBIT OF EDUCATION IN EUROPE AND AMERICA.

Chapter XVI gives a useful summary showing some important particulars in regard to education in thirty-four countries of Europe and twenty-nine countries of America, North and South.

FOREIGN UNIVERSITIES.

A useful table of foreign universities, giving dates of foundation, number of professors, and students, to the number of nearly 200, is given in Chapter XVII (p. 561).

SOCIAL PATHOLOGY IN EDUCATION.

A paper on the scientific study of the weakling classes of society is found in Chapter XVIII. All exact science begins with quantitative measurement and involves enumeration, accurate records of order of succession, date, duration, locality, environment, extent of influence, and number of cases of intermittences. Fix these things once and a basis is made for progress in science without retrograde movements. It is easy by future observations to verify the results found or to add an increment of new observations.

The study of the slums of East London—the “cloaca maxima” of modern civilization—has furnished a basis on which the grandest experiments for the elevation of the weakling classes have been instituted, and all countries with city problems to deal with are looking anxiously at the means employed and the results accomplished by these humane endeavors.

The three weakling classes—paupers, criminals, and insane—espe-

cially the first two, tend to come together in the same district of a city, thus forming what is called a "slum." The worst consequences of this segregation of the weakling classes is the propagation of pauperism, crime, and disease by education; for the slum is an educative influence well nigh irresistible to all children born within it.

LIST OF SUPERINTENDENTS OF SCHOOLS.

In chapter XIX is a list of State school officers, followed by a list of city school superintendents, brought down to the date of printing this report. About 800 cities and towns have supervision by salaried superintendents.

CITY SCHOOL SYSTEMS.

In the chapter on city school systems (pp. 603-616), Mr. J. C. Boykin, the specialist in charge, has made an interesting comparative table, showing the number and aggregate population of cities in the several States, together with value of school property, cost of tuition, school enrollment, and similar details. He has added a useful supplementary chapter (part II, chapter II) on the salaries of teachers; giving the schedules of salaries in sixty-seven cities, together with a historical exhibit showing the salaries in five cities for every year since the establishment of their public school systems. These five cities are St. Louis, Baltimore, Boston, New Orleans, and Cincinnati. These comparative tables show the rising estimation of the value of the teacher's services, and should be studied in connection with the increase of professional training among teachers and the gradual introduction of skilled superintendents into cities as managers of the schools.

SCIENTIFIC TEMPERANCE INSTRUCTION IN THE PUBLIC SCHOOLS.

A chapter worthy of careful attention in the present report is the compilation by the specialist on State systems, Mr. F. E. Upton, of the material relating to the compulsory temperance instruction in the several States and Territories. Out of forty-nine all but eleven have passed mandatory laws requiring scientific temperance instruction. This chapter contains information on text-books, course of study, together with a model sketch of a method of teaching the effects of alcohol on the system, the reports of school officials on the enforcement of the law (especially the report of George H. Martin on the results in Massachusetts), criticisms on the temperance instruction given in text-books, and replies to criticisms by Miss Mary H. Hunt.

COLLEGES AND UNIVERSITIES.

In the report for 1888-89 the course of study in more than 100 colleges and universities was tabulated. Mr. Lewis A. Kalbach, specialist on this subject, has prepared for the present report a supplementary table showing the course of study in 15 colleges and seminaries for

women, mostly located in the South and West (pp. 750-754). The statistics of colleges and universities are illustrated by graphic views showing the growth of coeducation in superior instruction, the distribution of regular college students among the five geographical divisions of the nation, the sources of income and the productive funds, and the benefactions received in the several divisions.

An exhibit is made (pp. 783-787) showing the courses of study (or schools) in the several departments of the State universities, and the manner in which the government of each is vested. A list of the new buildings for colleges during the year is reported on pages 795-798, compiled from the year books.

An interesting compilation of statistics regarding the length of the college curriculum, showing the increased requirements for graduation, together with remarks and opinions of prominent college men, is given in chapter VI (p. 799). Chapter VII gives a survey of the graduate departments of universities and colleges, showing their development and present status.

PROFESSIONAL EDUCATION.

Two elaborate chapters have been prepared by the specialist on professional education (IX and X), taking up 160 pages of this report. The exhibit is for ten years of growth in the several schools devoted to theology, law, medicine, and applied science in its several forms of engineering (civil, mechanical, and mining), architecture, agriculture, and university instruction in pedagogy. The comparison of American and European courses of study in these professional schools, it is believed, greatly enhances the value of these two chapters.

MISCELLANEOUS.

A chapter on the methods employed in the reformation of juvenile offenders (pp. 1063-1072), and another on the education of the colored race (1073-1102), and a third on the Swedish or Ling gymnastics (1103-1108), are followed by the usual compilation of excerpts from the documents of city and State superintendents. These present brief and pertinent expressions of opinion on such live topics of the day as civil instruction, compulsory attendance, course of study, and the readjustment of school programmes; on higher education, kindergartens, manual training, physical training, reading and literature, religious and moral training, school discipline, and text-books, the whole occupying nearly one hundred pages.

A similar collection of brief paragraphs culled from foreign educational periodicals during the year, by Dr. Klemm, as contained in chapter XVI, will give anyone an idea of the character of the information to be gleaned from foreign journals. In chapter XVII (pp. 1245-1300) Dr. Sheldon Jackson reports on the conduct of the schools of Alaska for the year, and in chapter XVIII is given the educational necrology.

CONCLUSION.

The three characteristic instruments of modern civilization are the railroad, the daily newspaper, and the common school.

The railroad means the connection of each part of the country with the market of the world. The newspaper means the participation of each man and woman, who can read, in the experience of the human race, so that each individual may profit by the lives of all his fellow men far and near.

The common school means the acquisition on the part of each boy and girl, whether rich or poor, of the necessary knowledge required to read the newspaper and when grown to be men and women to make use of the railroad to exchange the products of their own industry for a share in the products of the world's industry.

These implements of human invention are devised for the sake of the general welfare and to promote the cause of democracy.

The modern trend of human history since the discovery of America has been slowly moving toward this result. The New World gave a great field for adventure and the development of individuality. Adventure in new lands and on untried seas has been paralleled and accompanied by adventures in the world of thought and theory. In fact, the revival of learning, so called, preceded the epoch of discoveries, and this epoch then followed as a result. The revival of learning and the epoch of discovery ushered in the epoch of natural science, which has made possible the epoch of useful inventions.

The epoch of discoveries, too, led to the founding of colonies by the most hardy and headstrong among the citizens of western Europe. The accidents of birth and wealth do not bear transportation on ships that sail to new countries. Only the aristocracy of intellect and will power goes for anything in the settlement of a border land. Hence, with the settlement of America, every step has been toward democracy and local self-government and toward escape from the trammels of caste founded on birth and wealth.

So great has been the influence of America upon Europe, by way of reaction, that all the countries which have furnished immigrants for the New World have been drawn toward democracy so far as to have constitutional limitations adopted in their forms of government. This has been noteworthy in northern Europe, less so in southern Europe.

The progress grows more rapid as the Christian spirit which leavens our civilization sends forward, one after the other, its legions into the field; for great inventions, as well as great moral reforms, proceed from Christianity. The discovery of Watt in the last century gave us the steam engine. Fitch and Fulton soon applied it to the movement of boats; George Stephenson to railroads. In 1830 there were locomotives running between Manchester and Liverpool.

But even as late as 1840 there was only a force of two millions of horse

power derived from steam in the whole world. This doubled by 1850, and again doubled by 1860, and still again by 1870. Since 1870 the aggregate steam power of the world has increased from eighteen millions of horse power to sixty millions. About one-third of all the steam power in the world is in the United States—some twenty millions of horse power.

Of this vast force which toils for us, two-thirds is in the form of locomotives, which connect the back country with the cities and the cities with each other. Over twenty millions of horse power mounted on wheels in the form of locomotives is now in process of making all the people who live in the country sharers in city civilization. The people in cities have the advantage of the world's market and of the world's discoveries in science, art, literature, and history. The city offers to each of its inhabitants the inestimable blessings of society with the wise and good.

Now, it is steam power which has, so to speak, moved the back country into the city to the extent of twelve millions of horse power. What the country can produce of agricultural products and mining is made of much greater value by cheap transportation. Then, in turn, the products of manufactures and the articles that come from around the world are made cheaper to the farmer and the miner by the same process of cheap freights and the railroad.

In 1860 the cost of freight on railroads was 3 and 4 cents a mile for each ton; now it is less than 1 cent per mile.

We have stationary steam engines to the amount of 6,000,000 horse power manufacturing goods for us.

According to Engel, the great German statistician, there were in 1870 industries to the amount of \$32,000,000,000 that depended on steam for their motive power, and at this time there are upward of \$50,000,000,000 invested in industries for which the steam engine gives the force and the laborer furnishes only the guiding power.

Looking at the nations of the world, we can see which are producing the wealth and which are democratically lifting up their population into a share of the world product of industry by the statistics of their steam power. For each thousand inhabitants the United States has a steam power of 300 horses. Great Britain is the only nation which equals us in the amount of steam power per inhabitant. Germany has a little more than half as much, France less than half, and Russia only one-eighth as much, according to population.

I dwell on this lesson of the steam engine because it is this which is making us a wealthy nation.

In 1800 I find that the total product of each man, woman, and child in the United States did not amount to 10 cents a day. In 1850 it had increased to 25 cents. In 1880 it amounted to upwards of 40 cents. It now comes to nearly, or quite, 50 cents per day.

The new census gives us data to prove that the total increase of wealth in the last decade, 1880-90, was twenty billions, or an average of two billions a year. The increase, to some extent, is due to the increase of the value of land near cities and to new farming lands brought under cultivation. But far more of it comes from buildings and improvements which have been made by labor, aided by steam.

The use of machinery in productive industry causes a transfer of laborers from agriculture to manufactures and commerce. We need fewer persons to obtain for us the raw materials of food, clothing, and shelter. More persons can be spared for the elaboration of the material. Fewer persons are required to produce the bare necessities of life, and more are set to work on articles of luxury and human comfort. More and more persons are employed, too, for the care of the spiritual wants of protection and culture.

In a savage state, only 1 in 100 can be spared for the production of articles of luxury and ornament and for protection and culture. In the old civilization, before the invention of the steam engine, only 1 in 20 could be spared for such work. Now we can spare 1 in 10 of the population, and we are soon coming to the time when we can set 1 in 5 to work at the production and distribution of newspapers and books, at the use of the telegraph and telephone, the work of teaching and preaching and lecturing, and the work of the professions of law and medicine, which protect life and property.

The vocations of man that have for their object the production of comfort and ornament and the care for man's spiritual welfare are bound to grow from more to more with the increased application of machinery to productive industry, while a smaller proportion of the population will be needed for the production of raw material.

In the statistics of incomes for 1888 my attention has been attracted to the increase of comfortable, well-to-do families in those countries where the steam engine is much used and where the laborers are educated into artistic skill. Thirty out of every 100 families in Great Britain are receiving \$1,000 and upward a year. Think of the comforts that can be purchased in London for \$1,000.

France, thanks to its instruction of its people in forms of art, manufactures works of taste and ornament for the world, and 24 per cent of its families are receiving \$1,400 and upward a year. In England the 70 per cent of the population remaining receive on an average \$500 per family, and this means greater luxury than the average nobleman enjoyed 300 years ago. But in Italy, with only one-tenth as many steam engines per thousand inhabitants as Great Britain, there are only one-tenth as many families in the hundred that receive \$1,000 a year. Ninety-seven per cent of its families get on an average only \$300 a year. It is important to notice that the machinery of productive industry demands educated intelligence to supervise and guide its direction.

This has been one of the causes why the nations of Europe have, one after the other, felt the need of adopting national systems of education. Especially those like England, France, and Germany have seen that to hold the markets of the world it is necessary to develop the intelligence of the laboring classes by means of schools.

A still deeper lesson was learned by the results of the two wars which Prussia carried on, the first one with Austria and the second with France. Both of the conquered countries at once set about reforming their school systems. Austria has doubled its ratio of school attendance since the battle of Sadowa, and now has 13 per cent of the population in school.

France has increased its school attendance to 15 per cent of its population from the 9 per cent which it had in 1864. Meanwhile, the number of illiterate men and women in France has decreased from 58 to 18 in the 100. A great French statesman said that it was the German universities that conquered at Sedan.

The alarm at the military success of Prussia aided the English reformers in carrying through Parliament the radical measures of 1870. Large sums of money were given to encourage private schools and the school systems of towns. The schools thus aided were teaching at first about 8 per cent of the population. On the wave of this reform the friends of education succeeded in August, 1891, in making the schools free to all children of the compulsory age. France had done this ten years before. The effect of the English effort has been to increase the school enrollment from 8 per cent to 16 per cent of the population.

Of the other countries, Italy and Spain, have increased their school attendance to over 10 per cent of their respective populations, or to double the number enrolled in 1860, and have thereby decreased the amount of illiteracy.

Turning to our own country, one striking item of progress is that of the rapid increase of property used for school purposes. In 1870 the property for the common schools in the aggregate amounted to \$130,000,000. In twenty-two years this has increased to \$350,000,000, or almost exactly \$10,000,000 a year on an average. It is interesting to note that up to 1888 the London school board had expended \$12,000,000 for school buildings.

More remarkable than this is the increase of school attendance in the Southern States. In 1870 the south Atlantic division of States, comprising all from Delaware to Florida, enrolled in school only 6 per cent of the entire population. In 1890 the enrollment is 22 per cent or 1 in 5 of population. The south central States, including Missouri, Kentucky, and West Virginia, and the States south of them, enrolled in school only 7½ per cent in 1870, and more than 23½ per cent in 1891.

To understand at their true value the efforts of the South to make their schools what they should be, we ought to remember that the

wealth which numerous large cities give makes it easy in the North to raise money for the support of schools without making a great burden for the taxpayers. In the South the taxes are large, but do not yield the requisite amount to support the schools for more than 100 days in the south Atlantic division, nor for more than 90 days in the south central.

This, of course, is in process of correction, as the present villages grow into cities and the States grow wealthy.

As above shown the average length of school year in the north Atlantic division (full of cities) is 166 days; that of the north central division is 134 days. The largest enrollment of children in the schools is in the north central division, amounting to more than 25 per cent of the population. That of north Atlantic and the Pacific coast and mountain region falls below the south in proportion enrolled in school. This has been partly explained by the fact that children do not constitute so large a proportion of the population in those sections as in the other parts of the nation.

As a whole, the United States appears as enrolling in school quite 23 per cent of its entire population. This is a better showing than that of any other nation, except Saxony. But many other nations of Europe have a much longer annual school session than we have. Here is the place to show improvement in future years.

To sum up the results of our outlook, we see the nations of Europe first making education of all their people compulsory, and next, after some years, but as a logical consequence, making education free.

We see that there are reasons of self-preservation, both industrial and military, which lead to this. In our country the political reason was perhaps the first, as it is now the leading motive. We are to govern ourselves, and each of us is to help govern the rest. It is obvious that the better educated each citizen is the better governed we all shall be.

The introduction of instruction in manual training has become a large feature in recent years, and will grow a larger feature in proportion as cities are called upon to grapple with the population of their slums.

Higher education is becoming more practical in that it studies the problems of the people, and endeavors to solve them in the laboratory. University extension has a great rôle yet to perform to connect itself with the public libraries growing up everywhere in the cities, and to form classes of serious minded men and women throughout the community who are anxious to continue their studies for the sake of culture or for special preparations in arts.

In conclusion, I desire to take this opportunity to testify to the valuable services and willing coöperation of the corps of this office and in particular to recognize the assistance given me by the chief clerk, Mr.

John W. Holcombe, and by the chiefs of division, Col. Weston Flint, of the division of statistics; Mrs. H. F. Hovey, of the division of correspondence; Mr. Henderson Presnell, of the library; Mr. F. E. Upton, head of the editing corps; Dr. L. R. Klemm and Misses A. T. Smith and F. G. French, of the division of foreign exchange; and by Mr. Wellford Addis, specialist in professional schools, and Mr. J. C. Boykin, specialist in city systems.

W. T. HARRIS,
Commissioner.

Hon. J. W. NOBLE,
Secretary of the Interior.

PART I.

CHAPTER I.

STATISTICAL EXHIBIT OF EDUCATION IN THE UNITED STATES FOR THE YEAR 1889-90.

GENERAL SUMMARY OF PUPILS.

The following table shows the whole number of pupils of each grade enrolled in the educational system of the United States during the school year 1889-90.¹ The pupils in public and private schools and institutions are given separately.

According to the table, there was enrolled a grand total of 14,512,778 pupils, as against 13,726,574 in 1888-89, being an increase of 786,204, or 5.73 per cent.

These pupils formed 23.18 per cent of the population of the United States, or nearly one-fourth.

Of the total number, 14,010,533, or 96.54 per cent, were receiving elementary instruction; 367,003, or 2.53 per cent, secondary instruction, and 135,242, or 0.93 per cent, superior instruction.

Only about one pupil in forty is under secondary instruction, and one in one hundred and seven under superior instruction.

As regards percentage of the total population, 22.37 per cent, or one in four and one-half of the population, are under elementary instruction; 0.58 per cent, or one in one hundred and seventy-two, are under secondary instruction, and 0.22 per cent, or one in four hundred and fifty-five, are under superior instruction.

In the preceding Report of this Office (1888-89), the number of pupils in public high schools was estimated at 482,000. This estimate was based on the partial returns made by State superintendents. The number given in the present Report, 221,522, is the result of a special inquiry made by the Bureau into public high schools (see Part III of this Report). In this result all pupils in public high schools pursuing only elementary studies are excluded; *i. e.*, only the really secondary

¹ Excluding evening schools; art, manual and industrial training, trades, and business schools; schools for the defective, dependent, and delinquent classes, and Indian schools. These collectively enroll a considerable number of pupils.

pupils are taken into consideration. There are many pupils pursuing secondary studies in ungraded or partially graded schools who were not reached by this inquiry, which dealt only with public institutions formally denominated "high schools." Both of these considerations tend to reduce the number of public high-school pupils reported.

Of the total number of pupils reported, 12,755,950, or 87.9 per cent, are in public schools and institutions, and 1,756,828, or 12.1 per cent, in private.

Seven-eighths of all the education in the United States is public. The proportion of the public, however, varies much in the different grades, as will be seen from the table.

PUPILS.—GENERAL SUMMARY OF ALL GRADES, PUBLIC AND PRIVATE.

NOTE.—The classification of States made use of in the following table is the same as that adopted by the United States Census, and is as follows:
North Atlantic Division: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.
South Atlantic Division: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida.
South Central Division: Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, and Arkansas.
North Central Division: Ohio, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.
Western Division: Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon, and California.

	Pupils receiving HIGHER instruction.														
	Pupils receiving SECONDARY in- struction ("high- school grade"). ^a					In universities and colleges (for men exclusively and coeducational). ^b			In col- leges for women only (pri- vate). ^b		In normal schools. ^d			In agri- cultural and me- chanical colleges. (public). ^f	In schools of medi- cine, law, and the- ology. (private).
	Public.	Private. (largely estimated).	Public.	Private (in pre- paratory schools, acad- emies, semina- ries, etc.).	Private 145,481	Public. ^c	Private.	Total.	Public.	Private. ^e	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14		
The United States.....	12,494,233	1,510,300	221,522	145,481	7,071	39,060	46,131	11,992	26,775	8,139	34,964	6,349	35,806		
North Atlantic Division.....	3,024,980	534,500	83,630	40,937	675	14,326	15,001	2,544	11,917	.....	11,947	2,284	12,905	
South Atlantic Division.....	1,737,548	131,300	12,459	22,161	837	4,279	5,116	3,965	1,914	483	2,399	853	4,063		
South Central Division.....	2,298,111	221,900	11,820	26,547	929	5,311	6,240	3,754	2,194	823	3,017	1,174	3,855		
North Central Division.....	4,914,571	586,300	105,582	40,855	3,905	14,119	18,024	1,699	9,532	6,706	16,238	1,810	12,601		
Western Division.....	509,023	42,300	8,031	14,961	725	1,025	1,750	29	1,188	175	1,363	228	842		

^a Including pupils in preparatory or academic departments of higher institutions.

^b Excluding pupils in preparatory or academic departments; excluding, also, those in professional schools, who are included in column 14.

^c Mainly in State universities.

^d Excluding all but pupils in normal departments.

^e Private normal schools are, with one or two exceptions, scarcely superior to the ordinary secondary schools.

^f These figures do not include all the pupils who are beneficiaries of the land-grant act. The statistics of some of the land-grant schools can not be separated from the general statistics of the colleges or universities of which they are departments.

PUPILS—GENERAL SUMMARY OF ALL GRADES, PUBLIC AND PRIVATE—Continued.

Summary of pupils by grade.												Summary—public and private.				General summary.	
Elementary.				Secondary.		Higher.		Public.		Private.		Grand total of all pupils.	Per cent of population.	Per cent.			
Pupils.	Per cent of population.	Pupils.	Per cent of population.	Pupils.	Per cent of population.	Pupils.	Per cent of population.	Pupils.	Per cent of population.	Pupils.	Per cent of population.						
1	15	16	17	18	19	20	21	22	23	24	25	26					
The United States	14, 010, 533	Per cent. 22.37	367, 003	Per cent. .58	135, 242	Per cent. .22	12, 755, 950	Per cent. 20.37	1, 756, 828	Per cent. 2.81	14, 512, 778	Per cent. 23.18					
North Atlantic Division	3, 569, 480	20.51	124, 587	.72	45, 081	.26	3, 133, 516	18.00	605, 292	3.48	3, 739, 748	21.50					
South Atlantic Division	1, 868, 848	21.10	34, 620	.39	16, 937	.19	1, 753, 611	19.79	166, 794	1.88	1, 920, 405	21.68					
South Central Division	2, 520, 011	22.97	38, 367	.35	18, 040	.16	2, 314, 293	21.09	262, 190	2.39	2, 576, 418	22.49					
North Central Division	5, 500, 871	24.60	146, 437	.65	50, 372	.22	5, 035, 400	22.51	662, 280	2.96	5, 697, 680	23.48					
Western Division	551, 323	18.21	22, 992	.76	4, 212	.14	519, 195	17.15	50, 332	1.96	578, 527	19.11					

SUMMARY OF STATISTICS OF THE COMMON SCHOOLS, 1889-90.

The following statement is made up from returns for 1889-90, except in the case of one or two States, where returns for 1888-89 are used. The numbers here given are therefore subject to a slight future correction. The percentages, however, will not probably be altered.

GENERAL STATISTICS.

Population of the United States (census of 1890).....	62, 622, 250
Pupils enrolled	12, 697, 196
Per cent of population enrolled.....	20. 27
Average daily attendance	8, 144, 938
Per cent of enrollment	64. 1
Aggregate number of days attended	1,094,352,442
Average number of days the schools were kept	134. 3
Increase over last year	1. 1
Average number of days each pupil enrolled attended.....	86. 2
Number of public schoolhouses.....	224, 839
Value of all public school property.....	\$342, 876, 494
Value per capita of population	5. 43
Value per pupil in attendance	42. 10
Number of teachers:	
Males.....	125, 602
Females	238, 333
	363, 935
Per cent of male teachers.....	34. 5

FINANCES.

Revenue:	
From permanent funds.....	\$7, 797, 927
From State taxes.....	26, 189, 654
From local taxes.....	97, 137, 212
From other sources	11, 985, 425
Total.....	143, 110, 218
Percentage of revenue derived from—	
Permanent funds.....	5. 45
State taxes	18. 30
Local taxes	67. 89
Other sources	8. 36
Expenditure:	
Permanent investments (sites, buildings, etc.).....	\$26, 291, 796
Salaries of teachers and superintendents	91, 683, 338
Other current expenditure	22, 302, 350
Total.....	140, 277, 484
Increase	7, 688, 356
Per cent of increase	5. 80

Expenditure per capita of population:

For permanent improvements.....	\$0.42
For salaries.....	1.46
For other current purposes.....	.36
Total	2.24

Per cent of expenditure devoted to—

Permanent improvements.....	18.7
Salaries.....	65.4
Other purposes.....	15.9

Daily cost of education per pupil:

	<i>Cents.</i>
For salaries.....	8.4
For all purposes.....	12.9

Annual cost of education per pupil:

For salaries.....	\$11.26
For all purposes	17.22

Details are given in the following tables.

STATISTICS OF STATE SYSTEMS.

TABLE 1.—Total population.

Geographical divisions.	Population.			Percentage of increase from—		
	1870.	1880.	1890.	1860-70.	1870-80.	1880-90.
1	2	3	4	5	6	7
UNITED STATES	38,558,371	50,155,783	62,622,250	22.63	30.08	24.86
North Atlantic Division	12,298,730	14,507,407	17,401,545	16.09	17.96	19.95
South Atlantic Division	5,853,610	7,597,197	8,857,920	9.11	29.79	16.59
South Central Division	6,434,410	8,919,371	10,972,893	11.54	38.62	23.02
North Central Division	12,981,111	17,364,111	22,362,279	42.70	33.76	28.78
Western Division.....	990,510	1,707,697	3,027,613	60.02	78.46	71.27
North Atlantic Division:						
Maine.....	626,915	648,936	661,086	20.22	3.51	1.87
New Hampshire.....	318,399	346,991	376,530	22.38	9.01	8.51
Vermont.....	339,551	352,286	332,422	4.90	0.52	0.04
Massachusetts.....	1,457,351	1,783,085	2,238,943	18.38	22.35	25.57
Rhode Island.....	217,553	276,531	345,506	24.47	27.23	24.94
Connecticut.....	537,454	622,700	746,258	16.80	15.69	19.84
New York.....	4,382,759	5,082,871	5,997,853	12.94	15.97	18.00
New Jersey.....	906,096	1,131,116	1,444,933	34.83	24.83	27.74
Pennsylvania.....	3,521,951	4,282,891	5,258,014	21.19	21.61	22.77
South Atlantic Division:						
Delaware.....	125,015	146,608	168,493	11.41	17.27	14.93
Maryland.....	789,894	934,943	1,042,399	13.66	19.73	11.49
District of Columbia.....	131,700	177,624	230,392	75.41	34.87	29.71
Virginia.....	1,225,163	1,512,565	1,655,980	4.44	23.46	9.48
West Virginia.....	442,014	618,457	762,794	.....	39.92	23.34
North Carolina.....	1,071,361	1,399,750	1,617,947	7.93	30.65	15.59
South Carolina.....	705,606	955,577	1,151,149	0.27	41.10	15.63
Georgia.....	1,184,109	1,542,180	1,837,353	12.00	30.24	19.14
Florida.....	187,748	269,493	391,422	33.70	43.54	45.24
South Central Division:						
Kentucky.....	1,321,011	1,648,690	1,858,635	14.31	24.81	12.73
Tennessee.....	1,258,520	1,542,359	1,767,518	13.40	22.55	14.60
Alabama.....	996,992	1,262,505	1,513,017	3.40	26.63	19.84
Mississippi.....	827,922	1,131,597	1,289,600	4.63	36.68	13.96
Louisiana.....	726,915	939,946	1,118,587	2.67	29.31	19.01
Texas.....	818,579	1,591,749	2,235,523	35.48	94.45	40.44
Oklahoma.....	.....	.....	661,834	.....	.....	.....
Arkansas.....	484,471	802,525	1,128,179	11.26	65.65	40.58

a Decrease.

b Including 5,338 persons in Greer County (in Indian Territory), claimed by Texas.

TABLE 1.—*Total population—Continued.*

Geographical divisions.	Population.			Percentage of increase from—		
	1870.	1880.	1890.	1860-70.	1870-80.	1880-90.
1	2	3	4	5	6	7
North Central Division:						
Ohio.....	2,665,260	3,198,062	3,672,316	13.92	19.99	14.83
Indiana.....	1,680,637	1,978,301	2,192,404	24.45	17.71	10.82
Illinois.....	2,539,891	3,077,871	3,826,351	48.36	21.18	24.32
Michigan.....	1,184,059	1,636,937	2,063,889	58.06	38.25	27.92
Wisconsin.....	1,054,670	1,315,497	1,686,880	35.93	24.73	28.23
Minnesota.....	439,766	730,773	1,361,826	155.61	77.57	66.74
Iowa.....	1,134,020	1,624,615	1,911,896	76.91	36.06	17.68
Missouri.....	1,721,285	2,168,380	2,679,184	45.62	25.97	23.56
North Dakota.....	14,181	36,939	182,719	193.18	853.23	395.05
South Dakota.....	98,233	98,233	328,808			234.60
Nebraska.....	122,993	452,402	1,058,910	326.45	267.83	134.06
Kansas.....	364,399	996,096	1,427,096	239.91	173.35	43.27
Western Division:						
Montana.....	20,595	39,159	132,159		90.14	237.49
Wyoming.....	9,118	20,789	60,765		128.00	192.01
Colorado.....	39,864	194,327	412,193	16.30	387.47	112.12
New Mexico.....	91,874	119,565	158,693	61.76	30.14	23.46
Arizona.....	9,658	40,440	59,620		313.72	47.43
Utah.....	86,786	143,963	267,905	115.49	65.88	44.42
Nevada.....	42,941	62,266	45,761	519.67	46.54	226.51
Idaho.....	14,999	32,610	84,885		117.41	158.77
Washington.....	23,555	75,116	349,390	106.62	213.57	365.13
Oregon.....	90,923	174,768	313,767	73.30	92.22	79.53
California.....	560,247	864,694	1,208,130	47.44	54.34	39.72

a Decrease.

TABLE 2.—*Pupils enrolled in the common schools in 1870, 1880, and 1890.*

State or Territory.	Number of different pupils enrolled in the common schools.			Percentage of the total population enrolled.		
	1870.	1880.	1890.	1870.	1880.	1890.
1	2	3	4	5	6	7
The United States.....	6,871,522	8,767,505	12,657,196	17.82	19.67	20.27
North Atlantic Division.....	2,717,233	2,930,345	3,112,622	22.09	20.20	17.89
South Atlantic Division.....	366,322	1,242,811	1,746,751	6.26	16.36	19.72
South Central Division.....	482,185	1,371,975	2,306,929	7.49	15.38	21.02
North Central Division.....	3,168,946	4,033,828	5,015,217	24.41	23.23	22.43
Western Division.....	136,836	288,546	515,677	13.82	16.32	17.03
North Atlantic Division:						
Maine.....	a152,400	149,827	139,676	a24.31	23.09	21.13
New Hampshire.....	69,762	64,341	59,813	21.92	18.54	15.89
Vermont.....	c66,310	75,238	c65,608	c29.06	22.64	c19.74
Massachusetts.....	a269,000	306,777	371,492	a18.46	17.20	16.50
Rhode Island.....	a32,100	40,604	52,774	a14.76	14.68	15.27
Connecticut.....	110,640	119,694	126,565	20.58	19.22	16.95
New York.....	1,026,447	1,031,593	1,042,160	23.42	20.32	17.37
New Jersey.....	161,683	204,961	234,072	17.84	18.54	16.20
Pennsylvania.....	828,891	937,310	1,020,522	23.53	21.83	19.41
South Atlantic Division:						
Delaware.....	19,618	27,823	21,434	15.21	18.98	18.66
Maryland.....	100,992	162,431	184,351	12.93	17.37	17.63
District of Columbia.....	a14,300	26,499	36,996	a10.86	14.88	16.02
Virginia.....	17,490	229,736	342,269	a1.42	14.59	20.67
West Virginia.....	87,330	142,850	193,934	19.76	23.09	25.31
North Carolina.....	a68,060	252,612	322,533	a6.35	18.05	19.93
South Carolina.....	a38,000	134,072	201,260	a5.38	13.46	17.49
Georgia.....	11,150	236,533	d342,562	0.94	15.34	d19.00
Florida.....	10,132	39,315	92,472	5.40	14.50	23.63

a Approximately.

b Number of pupils attending two weeks or more.

c Includes pupils of legal school age only.

d In 1889.

TABLE 2.—*Pupils enrolled in the common schools in 1870, 1880, and 1890—Continued.*

State or Territory.	Number of different pupils enrolled in the common schools.			Percentage of the total population enrolled.		
	1870.	1880.	1890.	1870.	1880.	1890.
1	2	3	4	5	6	7
South Central Division:		1462065	2306,929			
Kentucky.....	a 169,477	a 276,090	208,966	12.83	16.74	22.00
Tennessee.....	b 100,000	390,217	447,950	b 7.94	19.92	25.34
Alabama.....	b 68,000	179,490	301,615	b 6.82	14.22	19.93
Mississippi.....	(c)	236,654	325,892	(c)	20.91	25.27
Louisiana.....	b 36,800	77,642	d 132,593	b 5.06	8.26	d 12.09
Texas.....	(c)	220,000	466,872	(c)	13.82	20.88
Arkansas.....	107,908	81,972	223,071	22.27	10.21	19.77
North Central Division:		4033828	5015217			
Ohio.....	717,902	729,499	797,439	26.93	22.81	21.72
Indiana.....	462,527	511,283	512,955	27.52	25.85	23.40
Illinois.....	652,715	704,041	778,319	25.70	22.88	20.34
Michigan.....	278,686	362,556	427,032	23.50	22.15	20.39
Wisconsin.....	267,891	299,457	351,723	25.40	22.77	20.84
Minnesota.....	110,560	180,248	280,960	25.16	23.09	21.58
Iowa.....	320,803	426,037	493,267	26.87	26.22	25.79
Missouri.....	280,473	482,986	620,314	16.29	22.27	23.15
North Dakota.....	} b 1,350	13,718	35,543	} b 9.52	10.15	19.45
South Dakota.....			78,043			23.74
Nebraska.....	12,791	92,549	240,300	10.40	20.46	22.69
Kansas.....	63,218	231,434	399,322	17.35	23.23	27.98
Western Division:		288576	515657			
Montana.....	1,544	4,270	16,880	7.50	19.90	12.85
Wyoming.....	175	2,907	7,052	1.92	13.98	11.62
Colorado.....	3,450	22,119	65,490	8.60	11.38	14.88
New Mexico.....	188	4,755	18,215	0.20	3.98	11.86
Arizona.....	(c)	4,212	7,989	(c)	10.42	13.40
Utah.....	b 16,000	24,326	37,279	b 18.44	16.90	17.93
Nevada.....	2,883	9,045	7,887	6.73	14.53	16.14
Idaho.....	1,048	5,834	14,311	6.99	17.89	16.95
Washington.....	4,760	14,780	55,964	19.87	19.68	16.02
Oregon.....	b 21,000	37,533	63,254	b 23.09	21.47	20.16
California.....	85,808	158,765	221,756	15.31	18.36	18.36
Alaska.....						

a Highest number enrolled at any one time.
 b Approximately.

c Public school system not yet established.
 d In 1889.

WHOLE NUMBER OF PUPILS (ENROLLMENT).

Table 2, p. 7, gives, by States, the whole number of different pupils enrolled in the common schools in 1870, 1880, and 1890; also a comparison of the school enrollment with the total population at each of these dates.

It will be seen that the whole number of pupils attending the common schools of the United States in 1890 was 12,697,196, or 20.27 per cent of the total population; there were only 17.82 per cent attending in 1870, and 19.67 per cent in 1880; the gain in the last twenty years has therefore been considerable.

This gain, it will be seen from the table, comes altogether from the States of the Southern and Western divisions. In the North Atlantic and North Central divisions there has been a continuous loss; in the former of these two divisions, the percentage of the population enrolled as pupils has decreased during the period 1870-1890 from 22.09 to 17.89 per cent; in the latter from 24.41 to 22.43 per cent.

This decrease has been heretofore remarked in the Reports of this Office, and an attempt made to assign the reasons for it.

In Maine, New Hampshire, and Vermont, there has been not only a relative, but also an absolute decrease in the enrollment, viz: In Maine from about 152,400 in 1870 to 139,676 in 1890; in New Hampshire from 69,762 in 1870 to 59,813 in 1890; and in Vermont from 66,310 in 1870 to 65,608 in 1890. These three are the only States showing a positive decrease in enrollment.

All the North Atlantic States except Rhode Island, however, show a loss in enrollment as compared with the population, and seven out of the twelve North Central States; the other five—Missouri, the two Dakotas, Nebraska, and Kansas—showing considerable gains; these five, however, started with a very low percentage of population enrolled in 1870, so a gain was to be expected.

It was suggested in the last Annual Report of this Bureau (for 1888–89) that the decrease in the relative number of pupils in the Northern States might be due in part to a decrease in the proportion of children in the total population. Of course, other things being equal, where there is the smallest proportion of children there will be the smallest school attendance. Now, the number of children in every one hundred persons varies greatly in different States, and may have been decreasing in the Northern States since 1870; so that the increase of enrollment, while falling behind the increase of population, may still have kept pace with the increase of school population (number of children of school age).

This question can not be completely and definitely settled until the census returns of the ages of the population in 1890 are compiled.

In some States the annual enumerations of the school population furnish indications as to the increase in the number of children. Take the five States, Massachusetts, Connecticut, New York, Illinois, and Wisconsin, and compare their increase in population, in school population, and in number of pupils enrolled in the schools, respectively, from 1870 to 1890:

States.	Increase, 1870 to 1890, in—		
	Population.	School population.	Pupils.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Massachusetts.....	53. 62	35. 31	38. 10
Connecticut.....	38. 86	26. 97	14. 34
New York.....	36. 85	24. 57	1. 53
Illinois.....	50. 65	34. 87	19. 24
Wisconsin.....	59. 94	43. 70	31. 30

It will be inferred from these figures that while in each of the five States under consideration there has been a loss in the relative number of children, as compared with the total population, there has been a still greater loss in the relative number of pupils in all except Massachusetts.

That is to say, while the decrease in the proportion of children in this

group of States accounts in part for the decrease of the percentage of the population attending school, it does not, except in the case of Massachusetts, wholly account for it. In Massachusetts a somewhat larger proportion of the children attend school than in 1870; in the other four States a considerably smaller.

The State of New York is particularly noticeable. While its total population has increased about three-eighths since 1870, and its school population about one-fourth, the increase in the number of pupils has been insignificant (1.53 per cent).

DUPLICATE REGISTRATION.

If the accuracy of the statistics of enrollment were unimpeachable we would be forced to the certain conclusion that not so large a proportion of the resident children of the Northern States (except in such cases as Massachusetts) attend the public schools now as in 1870. But, unfortunately, the statistics are known to be inaccurate, especially those of twenty years ago. The practice of duplicate registration, by no means done away with at the present day, was widely prevalent in former years, and tended to swell the school enrollment beyond—often far beyond—the true figures. There were not in 1870 so many pupils as reported. The loss of pupils in the last twenty years may therefore be only an apparent loss, due to erroneous statistics; though in such an aggravated case as New York, where the school population shows an increase of $24\frac{1}{2}$ per cent, but the enrollment one of only $1\frac{1}{2}$ per cent, in twenty years, it is difficult to resist the conviction that the decrease in school attendance is a real and not an apparent decrease, and such is in all probability the fact.

REPORT TO THE NATIONAL COUNCIL OF EDUCATION.

The important subject of duplicate registration was considered in detail in a report of a committee of the National Council of Education (W. T. Harris, chairman), in 1891, which ran as follows:

The statistics of no country or State can be considered as yet perfectly reliable in this item [enrollment or registration]. Here are some of the ways in which duplicate registration comes in:

(a) In rural districts a winter school is kept by one teacher, probably a man, and in the summer another session is kept, and by a woman. The statistics of these schools are reported to the central office of the town and thence to the State, without making account of the duplicate registration of pupils. The summer school registers a large number of new pupils, especially of young children, but retains a good many of the winter pupils.

As towns grow populous the two-session school is supplanted by the continuous-term school, and one registration takes the place of two. The States with rural districts, which are gradually adopting the continuous-term school, therefore frequently show a decrease in the annual enrollment of pupils, and seem, therefore, to be retrograding, whereas they are improving the quality and quantity of their education by increasing the annual term of school and by engaging better teachers, and by actually enrolling a larger number of pupils, though not counting any of these twice.

(b) But there is another source of duplicate enrollment in the fact that some schools, private academies being the first to do this, count each term of the year a separate affair, and give the enrollment for each of the three or four terms first in detail and then in the aggregate, without deducting duplications.

(c) A third and more dangerous form of duplicate enrollment comes from enrolling twice those who are promoted from one school to another during the year; they are counted once in the primary school, for example, and again in the intermediate or grammar school to which they are transferred. This third form of duplicate enrollment used to vitiate the statistics of the large cities on the Atlantic coast, Philadelphia in one year, for example, counting some 70,000 pupils twice in its returns, and making an aggregate of 177,000, when only 107,000 different pupils were actually enrolled.

(d) Another cause of duplication is the neglect to make a matter of registration of the item of attendance of a pupil in another school within the same year, when receiving him by transfer. The constantly shifting population of a city causes this to be a considerable item.

(e) Lastly, carelessness in keeping the annual register of a large school leads to a duplicate enrollment of many pupils who leave in the fall and return to school in the spring. Their former attendance has been forgotten by the principal of the school.

There is need for a good device to prevent this duplicate enrollment, which vitiates all conclusions based on the item of actual school attendance. It should be required of each teacher to enter in a column after each pupil's name the fact of attendance or nonattendance previously in the same year in any other school in the State.

In all large schools where there are many teachers and many separate roll books kept it should be required by the principal that each teacher should keep a column in which he or she writes after each pupil's name the "annual-register number," for the pupils enrolled in the annual register should be numbered. This "annual-register number" will prevent duplicate registration in the same school, and will facilitate the transfer of items of each separate teacher's roll book to the general register.

HOW THE DIFFERENT STATES STAND REGARDING NUMBER OF PUPILS ENROLLED.

Of all the States in the Union, Kansas has the largest proportion of its population attending school (27.98 per cent), and Wyoming the least (11.62 per cent). It is known, however, that there were in 1880 twice as many children to the hundred persons in Kansas as in Wyoming, so that after all the ratio of children attending school to the whole number of children may be about the same in the two States.

The States of the North Atlantic and Western divisions generally have comparatively few children, which accounts for their low percentage of pupils (17.89 and 17.03 per cent of the population, respectively).

The feature of preponderating interest in the educational history of the last twenty years has been the development of the common-school system of the South. This movement probably stands without a parallel. In 1870, in Mississippi and Texas, no traces can be found of the existence of a State school system; in several other States the common schools were confined principally to the larger cities. At present the schools of the South, taken as a whole, enroll a larger percentage

of the population than those of the older States of the North, and furnish to every child an opportunity to acquire at least the essential rudiments of a school education.

The school enrollment of the South Atlantic States, as appears from Table 2, increased from 6.26 per cent of the population in 1870 to 19.72 per cent in 1890; that of the South Central States from 7.49 per cent in 1870 to 21.02 per cent in 1890.

In each case the principal part of the development took place previous to 1880. In the decade from 1880 to 1890 the systems were rounded out and carried well on toward completion.

West Virginia, Tennessee, and Mississippi each now enrolls more than one-fourth of its population in its common schools; Virginia, Florida, Kentucky, and Texas more than one-fifth.

Louisiana as yet enrolls less than one-eighth (12.09 per cent), though in that State also notable progress has been made during the last two decades.

TABLE 3.—Average daily attendance.

State or Territory.	Average number of pupils daily attending school.			Average number attending daily for each 100 enrolled.		
	1870.	1880.	1890.	1870.	1880.	1890.
1	2	3	4	5	6	7
United States <i>a</i>	4, 077, 347	6, 144, 143	8, 144, 938	59.3	62.3	64.1
North Atlantic Division.....	1, 593, 658	1, 824, 487	2, 036, 459	58.7	62.3	65.5
South Atlantic Division.....	217, 495	776, 798	1, 116, 276	59.4	62.5	63.9
South Central Division.....	326, 422	902, 767	1, 470, 759	67.7	65.8	63.8
North Central Division.....	1, 849, 771	2, 451, 167	3, 188, 732	58.4	60.8	63.6
Western Division.....	90, 001	188, 924	332, 712	65.8	65.5	64.5
North Atlantic Division:						
Maine.....	100, 515	103, 115	98, 364	66.0	68.8	70.4
New Hampshire.....	45, 755	48, 966	41, 526	65.6	76.1	69.4
Vermont.....	44, 559	48, 606	45, 887	67.2	64.6	69.9
Massachusetts.....	b 199, 700	233, 127	273, 910	b 74.2	76.0	73.7
Rhode Island.....	21, 246	27, 217	33, 905	66.2	67.0	64.3
Connecticut.....	62, 625	73, 546	83, 656	56.6	61.4	66.1
New York.....	484, 705	573, 089	642, 984	47.2	55.6	61.7
New Jersey.....	78, 612	115, 194	133, 286	48.6	56.2	57.0
Pennsylvania.....	555, 941	601, 627	682, 941	67.1	64.2	66.9
South Atlantic Division:						
Delaware.....	b 12, 000	17, 439	19, 649	b 63.1	62.7	62.5
Maryland.....	b 48, 300	85, 778	102, 351	b 47.8	52.8	55.5
District of Columbia.....	b 9, 600	20, 637	28, 184	b 67.1	78.1	76.4
Virginia.....	8, 703	128, 404	198, 200	50.0	58.2	58.0
West Virginia.....	55, 083	91, 604	121, 700	63.1	64.1	63.0
North Carolina.....	41, 912	170, 100	263, 100	61.6	67.3	63.0
South Carolina.....	b 26, 000	b 90, 600	147, 799	b 68.4	b 67.6	73.4
Georgia.....	b 8, 000	145, 190	c 230, 364	b 71.7	61.4	c 67.3
Florida.....	b 7, 900	27, 046	64, 819	b 73.0	68.8	70.1
South Central Division:						
Kentucky.....	112, 630	178, 000	231, 233	66.5	64.5	56.5
Tennessee.....	b 64, 000	208, 528	323, 548	b 64.0	69.4	72.2
Alabama.....	52, 060	117, 978	182, 467	76.6	65.7	60.5
Mississippi.....	(<i>d</i>)	156, 761	200, 790	(<i>d</i>)		61.6
Louisiana.....	25, 832	b 54, 800	c 92, 066	70.2	b 70.6	c 69.4
Texas.....	(<i>d</i>)	b 132, 000	291, 941	(<i>d</i>)	b 60.0	62.5
Arkansas <i>b</i>	71, 900	54, 700	148, 714	66.6	66.7	66.7
North Central Division:						
Ohio.....	446, 147	476, 279	549, 269	62.1	65.3	68.9
Indiana.....	291, 089	321, 659	342, 275	62.9	62.9	66.7
Illinois.....	339, 540	431, 638	538, 310	52.0	61.3	69.1
Michigan <i>b</i>	184, 000	240, 000	282, 000	66.1	66.2	66.0
Wisconsin.....	b 133, 000	b 156, 000	200, 457	b 49.7	b 52.1	57.0

a Excluding Alaska.

b Approximately.

c In 1889.

d Common-school system not yet established.

TABLE 3.—Average daily attendance—Continued.

State or Territory.	Average number of pupils daily attending school.			Average number attending daily for each 100 enrolled.		
	1870.	1880.	1890.	1870.	1880.	1890.
1	2	3	4	5	6	7
North Central Division—Continued.						
Minnesota	46,658	a 78,400	127,025	42.2	a 43.5	45.2
Iowa	202,246	259,836	306,309	63.1	61.1	62.1
Missouri	a 159,000	a 281,000	384,627	a 56.7	a 58.2	62.0
North Dakota	} a 800	8,530	20,694	} a 59.3	62.2	58.2
South Dakota			48,327			61.9
Nebraska	a 7,890	60,156	146,139	a 61.7	65.0	60.8
Kansas	39,401	137,669	243,300	62.3	59.5	60.9
Western Division:						
Montana	a 1,030	a 3,000	10,596	a 66.7	a 70.3	62.5
Wyoming a	100	1,920	b 4,300	57.1	66.1	b 67.2
Colorado	1,995	12,618	38,715	58.2	57.0	59.1
New Mexico a	125	3,150	c 12,000	66.5	66.2	c 80.0
Arizona	(d)	2,847	4,702	(d)	67.6	58.9
Utah	a 12,000	17,178	20,967	a 75.0	70.6	56.2
Nevada	1,590	5,401	5,064	55.2	59.7	68.6
Idaho a	690	3,863	b 500	65.8	66.2	66.5
Washington	a 3,200	10,546	30,456	a 67.2	71.3	66.0
Oregon	a 15,000	27,435	43,333	a 71.4	73.1	68.5
California	54,271	100,966	146,589	63.3	63.6	66.1

a Approximately.

b In 1887-88.

c In 1888-89.

d Common-school system not yet established.

AVERAGE NUMBER OF PUPILS (AVERAGE DAILY ATTENDANCE).

The average number of pupils daily attending the common schools of the United States in 1889-90 was 8,144,938, or 64.1 per cent of the whole number of pupils enrolled.

In other words, each pupil enrolled attended school on an average 64.1 days out of every 100 days the schools were in session. In 1870 it was 59.3 days, and in 1880 62.3 days, thus showing an increasing regularity of attendance.

The regularity of attendance is nearly uniform in all sections of the country, the average attendance being a little more than five-eighths the enrollment.

Minnesota stands phenomenally low in this respect. This State alone enjoys the distinction of having an average attendance less than one-half its enrollment. This can hardly be the case in reality. There is no reason why Minnesota should stand so far below all other States in point of regularity of school attendance. The anomaly is probably due to some peculiar method of ascertaining the average attendance in that State; a comparison of the average expenditure per pupil in Minnesota and other States, made in a subsequent table, leads to the same inference.

TABLE 4.—Aggregate number of days' attendance, length of school term, and average number of days attended by enrolled pupils.

State or Territory.	Aggregate number of days' attendance.	Average number of days attended by each pupil.	Average number of days the schools were kept.			Increase or decrease since 1889.
			1870.	1880.	1890.	
1	2	3	4	5	6	7
United States <i>a</i>	1, 094, 352, 442	<i>Days.</i> 86.2	<i>Days.</i> 122.2	<i>Days.</i> 130.3	<i>Days.</i> 134.3	<i>Days.</i> I ... 1.1
North Atlantic Division.....	339, 318, 183	109.0	143.9	150.2	166.6	I ... 3.1
South Atlantic Division.....	108, 629, 992	62.2	109.2	92.4	97.2	D ... 1.8
South Central Division.....	129, 623, 667	56.2	82.5	79.2	88.1	D ... .3
North Central Division.....	471, 834, 484	94.1	122.9	139.8	147.9	I ... 1.4
Western Division.....	44, 941, 116	87.2	119.9	129.2	135.1	I ... .8
North Atlantic Division:						
Maine.....	11, 016, 768	73.9	99	109	112	I ... .5
New Hampshire.....	4, 887, 610	81.7	85	105.3	117.7	I ... 3.8
Vermont.....	6, 241, 671	95.1	105.7	125.5	136	I ... 1.5
Massachusetts.....	48, 482, 070	130.5	166	177	177	I ... 6
Rhode Island.....	6, 374, 140	120.8	170	184	188	D ... 1
Connecticut.....	15, 267, 220	120.7	168.5	179	182.5	I ... 2.2
New York.....	120, 655, 700	115.8	176	178.5	186.5	I ... 9
New Jersey.....	25, 590, 912	109.3	174	192	192	I ... 2
Pennsylvania.....	100, 802, 092	98.8	121.2	133.4	147.6	D ... 2.2
South Atlantic Division:						
Delaware.....	3, 261, 734	103.7	<i>b</i> 132	158	166	I ... <i>c</i> 2.5
Maryland.....	18, 832, 584	102.2	180	187	184	D ... 2
District of Columbia.....	5, 012, 255	135.8	<i>b</i> 200	193	178	D ... 3
Virginia.....	23, 398, 220	68.3	<i>b</i> 93	112.8	118	D ... 1
West Virginia.....	11, 804, 900	61.1	82.4	90	97	I ... 1
North Carolina.....	12, 036, 175	37.3	<i>b</i> 50	50	59.2	D ... <i>c</i> 2.1
South Carolina.....	10, 286, 810	51.1	<i>b</i> 100	70	69.6	I ... 1.6
Georgia.....	<i>d</i> 16, 219, 034	<i>d</i> 47.4	<i>b</i> 110	<i>b</i> 65	<i>d</i> 70.4	I ... 2
Florida.....	7, 778, 280	84.1			120	D ... 30
South Central Division:						
Kentucky.....	21, 735, 902	53.1	<i>b</i> 110	102	94	I
Tennessee.....	27, 825, 128	62.1	<i>b</i> 77	68	86	I ... 1
Alabama.....	13, 405, 900	44.5	49	81.3	73.5	D ... 2.3
Mississippi.....	16, 665, 570	51.1	(<i>f</i>)	74.5	83	D ... 4
Louisiana.....	<i>d</i> 9, 648, 517	<i>d</i> 72.8	<i>b</i> 65	78.8	<i>d</i> 104.8	I ... 11.8
Texas.....	29, 194, 100	62.5	(<i>f</i>)	71.7	100	D ... <i>c</i> 2
Arkansas.....	<i>b</i> 11, 153, 550	<i>b</i> 50.0			<i>b</i> 75	I
North Central Division:						
Ohio.....	91, 456, 590	114.7	155.8	152	166.5	I ... 1.5
Indiana.....	44, 495, 750	86.8	97	136	130	D ... 2
Illinois.....	83, 653, 370	107.5	134	142	148	I ... 2
Michigan.....	<i>b</i> 43, 992, 000	<i>b</i> 103.0	138	150	156	I ... 2
Wisconsin.....	31, 792, 470	90.4	154	165	158.6	I
Minnesota.....	16, 259, 200	57.9	63	<i>b</i> 94	128	I ... 2
Iowa.....	47, 784, 204	96.9	124	148	156	I ... 2
Missouri.....	49, 750, 083	80.2	<i>b</i> 90	<i>b</i> 104	129.4	I
North Dakota.....	2, 338, 442	65.6	{ <i>b</i> 75	{ <i>b</i> 96	{ 113	D ... 7
South Dakota.....	7, 907, 415	89.6	{ 70	{ 82	{ 145	I ... 4
Nebraska.....	20, 459, 469	85.2	70	82	140	I ... <i>c</i> 1.5
Kansas.....	32, 845, 500	82.3	105	120	135	I ... 7
Western Division:						
Montana.....	1, 514, 409	89.2	<i>b</i> 89	96	142.7	I ... .7
Wyoming.....	<i>b</i> <i>g</i> 511, 700	<i>b</i> <i>g</i> 80.6	<i>b</i> 200	119	<i>b</i> <i>g</i> 119	I
Colorado.....	5, 590, 446	85.4	86	<i>b</i> 132	144.4	D ... 5
New Mexico.....	<i>b</i> <i>h</i> 756, 000	<i>b</i> <i>h</i> 50.4	<i>b</i> 111	111	<i>b</i> <i>h</i> 63	I ... 6
Arizona.....	592, 452	74.2	(<i>d</i>)	109	126	D ... 2
Utah.....	2, 788, 611	74.8	<i>b</i> 150	128	133	D ... 2
Nevada.....	708, 960	96.0	<i>b</i> 142	143	140	D ... 5
Idaho.....	<i>b</i> 663, 000	<i>b</i> 46.3	<i>b</i> 40	94	<i>b</i> 69.8	D ... 14.2
Washington.....	3, 591, 151	64.1	<i>b</i> 80	<i>b</i> 91	97.2	I ... 5.2
Oregon.....	5, 121, 961	81.0	<i>b</i> 90	90	118.2	I ... 14.3
California.....	23, 102, 426	104.2	126	146.6	157.6	D ... 2.8

a Excluding Alaska.*b* Approximately.*c* Average annual change in two years.*d* In 1889.*e* In 1890, 83.2 days.*f* Public school system not yet established.*g* In 1887-88.*h* In 1888-89.

AGGREGATE ATTENDANCE, LENGTH OF SCHOOL TERM, ETC.

The total number of days attended by all pupils is given in column 2 of the preceding table. From this it is seen that the total number of days attended in 1889-90 was 1,094,352,442, or an average of 86.2 days for each pupil enrolled (column 3).

The average length of the school term in 1870, 1880, and 1890 is given in columns 4, 5, and 6. In 1890 it averaged 134.3 days for the United States, an increase of 2.1 days over 1870.

This does not so well exhibit the increase in the length of school term which has taken place, as will be the case if the different divisions are considered separately. In the North Atlantic States the school term has increased from 148.9 days, 1870, to 166.6, in 1890, a very notable gain; in the North Central States from 129.9 days, in 1870, to 147.9 days, in 1890, a still greater gain. The States of the Western division show a gain nearly as large. The multiplication of country schools, mainly of short term, in the South has, however, kept the average school term of the United States nearly stationary. In 1880, indeed, it was less than in 1870.

In the two Southern divisions the average school term was less in 1880 than 1870. This is owing to the circumstance that there were in the South a larger proportion of long-term city schools in 1870 than in 1880.

In fact, as has been stated before, the "average length of the school term" in the United States, as well as in individual States, depends largely on the ever varying proportion of city and country schools (*i. e.*, long-term and short-term schools), and hence fails to possess due significance. The addition of new city schools to a State system lengthens the average term without there having been necessarily any change of term in the schools previously established. A classification into city and country schools, in matter of school term, is greatly needed.

There have been two notable cases of actual lengthening the school terms during the year 1889-90. In New York the length of the school term in rural districts was changed by act of legislature from 28 to 32 weeks, thus increasing the average term of the State from $177\frac{1}{2}$ to $186\frac{1}{2}$ days; and in Georgia a large increase in the State appropriation for schools had the effect of increasing the average school term of the State from 70.4 to 83.3 days, with prospect of still greater increase the ensuing year.

Column 7 of the table shows a loss during the past year of thirty days in the average school term of Florida. The school term of that State, however, is very roughly estimated by the State superintendent, and it is not probable that so great a loss has been actually experienced. Louisiana shows a gain of 11.8 days, and Oregon of 14.3 days.

TABLE 5.—*Private schools as compared with the public schools—total school enrollment.*

State or Territory.	Number of pupils enrolled in private schools.	Number of pupils enrolled in public schools.	Total enrollment in all schools.	Per cent of pupils in private schools.	Per cent of population in all schools.
1	2	3	4	5	6
UNITED STATES.....	a 1,611,200	12,697,196	14,308,393	Per cent. a 11.26	Per cent. 22.85
North Atlantic Division.....	a 568,700	3,112,622	3,681,322	b 15.45	21.15
South Atlantic Division.....	a 147,500	1,746,751	1,894,251	b 7.80	21.39
South Central Division.....	a 237,300	2,306,929	2,544,229	b 9.33	23.18
North Central Division.....	a 603,900	5,015,217	5,619,117	b 10.75	25.14
Western Division.....	a 53,800	515,677	569,477	b 9.45	18.81
North Atlantic Division:					
Maine.....					
New Hampshire.....	7,750	59,813	67,563	11.47	17.94
Vermont.....	6,225	65,608	71,833	8.67	21.60
Massachusetts.....	58,179	371,492	429,671	13.54	19.20
Rhode Island.....	c 9,753	52,774	62,527	15.60	18.10
Connecticut.....	19,066	126,505	145,571	13.10	19.51
New York.....	208,409	1,042,160	1,250,569	16.66	20.85
New Jersey.....	47,279	234,072	281,351	16.81	19.47
Pennsylvania.....					
South Atlantic Division:					
Delaware.....					
Maryland.....					
District of Columbia.....	3,193	36,906	40,025	7.80	17.37
Virginia.....					
West Virginia.....					
North Carolina.....					
South Carolina.....					
Georgia.....					
Florida.....					
South Central Division:					
Kentucky.....					
Tennessee.....	54,500	447,950	502,450	10.85	28.38
Alabama.....					
Mississippi.....	25,100	325,862	350,962	7.15	27.22
Louisiana.....					
Texas.....					
Arkansas.....					
North Central Division:					
Ohio.....					
Indiana.....					
Illinois.....	105,232	778,319	883,551	11.91	23.10
Michigan.....	39,900	427,032	466,932	8.55	22.29
Wisconsin.....					
Minnesota.....					
Iowa.....					
Missouri.....					
North Dakota.....					
South Dakota.....					
Nebraska.....					
Kansas.....					
Western Division:					
Montana.....	1,720	16,880	18,700	9.20	14.15
Wyoming.....					
Colorado.....					
New Mexico.....					
Arizona.....					
Utah.....	9,894	37,279	47,173	20.94	22.68
Nevada.....	585	7,387	7,982	7.45	17.44
Idaho.....					
Washington.....	3,270	55,964	59,234	5.52	16.95
Oregon.....	5,062	63,254	68,316	7.41	21.78
California.....	c 21,460	221,756	243,216	8.81	20.13

a Estimate for the whole division on the basis of the States reporting.

b These summaries embrace only the States tabulated in the same columns below.

c School census return; includes only children of school age.

d In 1888-89.

PRIVATE SCHOOLS—TOTAL ENROLLMENT IN ALL SCHOOLS.

The total number of pupils in private schools of primary and secondary grade in the United States is estimated at 1,611,200; this, added to the public-school enrollment, gives a grand total of 14,308,396 pupils

enrolled in both public and private schools of elementary and secondary grades, or 22.85 per cent of the total population.

Private-school pupils form 11.26 per cent, or about one-ninth, of the total enrollment in all schools of those grades (column 5). The proportion of private pupils is greatest in New Jersey (16.81 per cent) and least in Oregon (9.45 per cent). In general, there is a greater proportion of private pupils in the North than in the South.

The estimate of the number of private-school pupils in the United States is based upon the reports of State superintendents in eighteen States. In very few of these States is the private-school enrollment fully reported. In Michigan, for instance, one county is credited with only four pupils, a county in Montana with only one, and a county in Mississippi with only five. Those counties from which no reports at all are tabulated in the State reports are given by the Bureau the same number of pupils as the average of the rest of the State.

In the same way the States from which no information has been furnished have been given the same number of pupils as the average of the other States in the same division.

There can be scarcely any doubt that the result is considerably too small, and should be increased at least one-fourth or one-fifth. This would place the number of private-school pupils below the superior grade in the United States at about 2,000,000.

The difficulties of collecting private-school statistics have been well exemplified in Massachusetts the past year. That State has a law requiring all persons in charge of private schools to make report to the State board. Blank forms of inquiry were sent out by the State superintendent through the school committees of towns, as that seemed the only practicable way of executing the law, in the absence of specific information concerning the name, location, or even the existence of private institutions. Replies were received from only 125 towns out of 351. Of these 125 there were 45 that reported no private schools. "It is probable," the State School Report says, "that the returns received cover less than one-half the children attending parochial schools throughout the State. This, however, is only conjectured."

The statistics of private schools, as furnished by State superintendents, are in general of such varying degrees of imperfection from year to year that they furnish no reliable basis for determining to what extent the private are gaining upon the public schools. Any apparent gain in recent years may very probably be attributed to more complete returns of private-school pupils.

Full and accurate returns of private schools are a *sine qua non* in ascertaining the extent of the diffusion of education. Any exhibit which does not include such schools must remain an imperfect and unsatisfactory one.

TABLE 6.—*School accommodations and value of school property.*

State or Territory.	Number of public school-houses.	Value of all public school property.	Average value per capita of population.	Average value per pupil.
1	2	3	4	5
United States <i>a</i>	\$224, 839	b\$342, 876, 494	\$5. 43	\$42. 10
North Atlantic Division	46, 082	b 132, 608, 792	7. 62	65. 12
South Atlantic Division	32, 396	b 14, 310, 282	1. 62	12. 82
South Central Division	40, 172	b 14, 171, 468	1. 29	9. 64
North Central Division	97, 169	156, 754, 469	7. 01	49. 16
Western Division	9, 020	b25, 031, 492	8. 27	75. 23
North Atlantic Division:				
Maine	4, 354	3, 455, 965	5. 23	35. 14
New Hampshire	2, 078	2, 637, 464	7. 00	63. 51
Vermont	c 2, 483			
Massachusetts	c 7, 147			
Rhode Island	482	2, 739, 672	7. 93	86. 80
Connecticut	1, 643	6, 403, 200	8. 58	76. 54
New York	12, 022	41, 606, 735	6. 94	64. 71
New Jersey	1, 673	8, 629, 793	5. 97	64. 74
Pennsylvania	14, 200	35, 435, 963	6. 74	51. 83
South Atlantic Division:				
Delaware	452	836, 749	4. 97	42. 58
Maryland	c 2, 189			
District of Columbia	96	d 1, 761, 000	d 8. 07	d 66. 43
Virginia	6, 408	2, 235, 085	1. 35	11. 27
West Virginia	4, 814	2, 483, 528	3. 26	20. 41
North Carolina	5, 793	852, 705	. 53	4. 20
South Carolina	3, 264	447, 353	. 39	3. 08
Georgia	c 7, 047			
Florida	c 2, 333	573, 862	1. 47	8. 85
South Central Division:				
Kentucky	7, 896	3, 747, 830	2. 02	16. 21
Tennessee	6, 241	2, 633, 520	1. 49	8. 14
Alabama	c 6, 495			
Mississippi	6, 107	1, 500, 000	1. 16	7. 47
Louisiana <i>e</i>	c 2, 276			
Texas	9, 065	3, 842, 260	1. 72	13. 16
Arkansas	2, 592	897, 858	. 80	f 6. 04
North Central Division:				
Ohio	12, 813	32, 631, 549	8. 89	59. 40
Indiana	9, 907	14, 979, 339	6. 83	43. 76
Illinois	12, 252	26, 803, 585	7. 00	49. 79
Michigan	7, 531	13, 858, 627	6. 62	f 49. 14
Wisconsin	6, 476	10, 800, 000	6. 40	53. 88
Minnesota	5, 864	10, 958, 608	8. 42	86. 26
Iowa	12, 997	13, 036, 872	6. 85	42. 77
Missouri	c 9, 712	12, 194, 381	4. 55	31. 70
North Dakota	1, 483	1, 515, 602	8. 29	73. 23
South Dakota	3, 153	2, 685, 284	8. 17	55. 57
Nebraska	5, 937	6, 613, 464	6. 24	45. 25
Kansas	9, 044	10, 617, 149	7. 44	43. 64
Western Division:				
Montana	355	994, 378	7. 52	93. 86
Wyoming <i>df</i>	140			
Colorado	1, 190	4, 387, 809	10. 65	113. 35
New Mexico <i>fg</i>	390			
Arizona	c 219	268, 435	4. 50	57. 09
Utah	c 514	945, 982	4. 55	45. 12
Nevada	151	276, 736	6. 05	54. 65
Idaho	315	g 344, 500	g 4. 50	fg 39. 74
Washington	1, 126	2, 000, 359	5. 72	54. 12
Oregon	1, 499	1, 769, 150	5. 64	39. 89
California	3, 121	13, 624, 143	11. 28	92. 94

a Excluding Alaska.*b* The value of school property in the States not reporting is estimated, in order to obtain total.*c* Number of schools.*d* In 1887-88.*e* In 1889.*f* Approximately.*g* In 1888-89.

TABLE 7.—*Teachers.*

State or Territory.	Whole number of different teachers employed.			The percentage male teachers are of the whole number.		
	Males.	Females.	Total.	1870.	1880.	1890.
1	2	3	4	5	6	7
United States.....	125,602	238,333	363,935	<i>Per cent.</i> 38.7	<i>Per cent.</i> 42.8	<i>Per cent.</i> 34.5
North Atlantic Division.....	18,335	73,152	91,487	26.3	28.8	20.0
South Atlantic Division.....	19,524	20,206	39,730	59.5	62.5	49.1
South Central Division.....	28,520	20,957	49,477	65.9	67.2	57.6
North Central Division.....	54,547	113,686	168,233	42.8	41.7	32.4
Western Division.....	4,676	10,332	15,008	46.5	40.3	31.1
North Atlantic Division:						
Maine.....	<i>a</i> 1,199	<i>a</i> 6,318	7,517	<i>a</i> 25.2	<i>a</i> 27.2	<i>a</i> 16.0
New Hampshire.....	306	2,808	3,114	16.5	16.8	9.8
Vermont.....	528	3,872	4,400	<i>a</i> 16.2	16.8	12.0
Massachusetts.....	1,017	9,307	10,324	13.1	13.2	9.9
Rhode Island.....	174	1,204	1,378	<i>a</i> 20.0	20.2	12.6
Connecticut.....	<i>a</i> 549	<i>a</i> 3,544	<i>a</i> 4,093	<i>a</i> 22.6	<i>a</i> 22.8	<i>a</i> 13.4
New York.....	5,358	26,345	31,703	23.2	26.0	16.9
New Jersey.....	822	3,643	4,465	32.4	23.5	18.4
Pennsylvania.....	8,382	16,111	24,493	42.2	45.5	34.2
South Atlantic Division:						
Delaware.....	<i>a</i> 217	<i>a</i> 484	701	27.6	<i>a</i> 46.6	<i>a</i> 31.0
Maryland.....	1,065	2,761	3,826	<i>a</i> 45.4	42.6	27.8
District of Columbia.....	97	648	745	6.9	7.9	13.0
Virginia.....	3,119	4,404	7,523	25.1	61.8	41.5
West Virginia.....	3,483	2,008	5,491	73.3	75.1	63.4
North Carolina.....	4,174	2,893	7,067	74.1	<i>a</i> 71.3	53.0
South Carolina.....	2,163	2,201	4,364	<i>a</i> 61.0	59.5	49.6
Georgia.....	4,000	3,503	7,503	55.0	<i>a</i> 65.2	53.3
Florida.....	1,206	1,304	2,510	63.8	61.6	48.0
South Central Division:						
Kentucky.....	4,532	4,509	9,041	64.8	64.6	50.1
Tennessee.....	5,082	3,146	8,228	72.1	74.4	61.8
Alabama.....	3,976	2,342	6,318	<i>a</i> 61.1	63.8	62.9
Mississippi.....	3,624	3,697	7,321	(<i>b</i>)	61.2	49.5
Louisiana.....	1,227	1,446	2,673	26.6	46.1	45.9
Texas.....	6,642	4,238	10,880	(<i>b</i>)	<i>a</i> 75.0	61.1
Arkansas.....	3,437	1,579	5,016	74.2	78.5	68.5
North Central Division:						
Ohio.....	10,841	14,315	25,156	43.0	47.8	43.1
Indiana.....	6,780	6,498	13,278	60.1	57.5	51.1
Illinois.....	7,522	15,642	23,164	43.6	39.7	32.5
Michigan.....	3,561	12,429	15,990	25.4	29.2	22.3
Wisconsin.....	2,388	9,649	12,037	<i>a</i> 28.8	28.8	19.8
Minnesota.....	2,114	6,733	8,847	32.5	35.9	23.9
Iowa.....	5,460	21,107	26,567	38.6	33.6	20.6
Missouri.....	6,123	7,662	13,785	<i>a</i> 65.3	58.1	44.4
North Dakota.....	560	1,422	1,982	} <i>a</i> 25.7	} 40.8	28.3
South Dakota.....	1,346	3,294	4,640			29.0
Nebraska.....	2,861	7,694	10,555			27.1
Kansas.....	4,991	7,241	12,232	48.2	45.1	40.8
Western Division:						
Montana.....	143	481	624	71.1	38.5	22.9
Wyoming.....	58	201	259	50.0	44.3	22.4
Colorado.....	622	1,753	2,375	56.8	36.4	26.2
New Mexico.....	310	162	472	100.0	78.0	65.7
Arizona.....	93	147	240	(<i>b</i>)	47.5	38.8
Utah.....	317	363	680	<i>a</i> 55.1	54.5	46.0
Nevada.....	41	210	251	34.0	46.7	16.3
Idaho.....	<i>a</i> 166	<i>a</i> 331	<i>a</i> 497	76.9	57.4	<i>a</i> 33.4
Washington.....	633	957	1,610	47.5	37.4	40.6
Oregon.....	1,111	1,455	2,566	<i>a</i> 51.7	48.3	43.3
California.....	1,162	4,272	5,434	41.6	33.6	21.4

a Approximately.*b* Public-school system not yet organized.

TABLE 9.—Showing the amount of public school revenues received from different sources, mainly for 1889-90.

State or Territory.	From per- manent funds and rents.	From taxation.					Total from taxes.	Increase or decrease since preced- ing year.	Local taxes.	Increase or decrease since preced- ing year.	Total from taxes.	From other sources than the fore- going.	Total revenue for the year, excluding money bor- rowed.
		2	3	4	5	6								7	8	9
The United States <i>a</i>													
North Atlantic Division	\$7,797,927	\$26,189,654	I. . . \$990,408	\$97,137,212	I. \$6,368,248	\$123,326,866	3,000,906	\$11,985,425	\$143,110,218				
South Atlantic Division	1,025,000	7,430,470	I. . 140,928	37,965,654	I. . 4,039,446	45,396,124	527,340	3,000,906	49,422,630				
North Central Division	427,156	3,585,868	I. . 167,247	4,050,870	I. . 179,365	7,586,738	8,541,234	527,340	8,541,234				
South Central Division	1,452,487	5,831,972	I. . 421,107	2,959,016	I. . 277,591	8,790,988	11,163,424	9,949,949	11,163,424				
Western Division	4,326,839	6,828,967	I. . 161,999	45,833,453	I. . 5,500,318	52,662,420	6,356,801	6,356,801	63,346,060				
Western Division	565,845	2,562,377	I. . 108,127	6,328,219	I. . 321,528	8,890,596	1,180,429	1,180,429	10,636,670				
North Atlantic Division:													
Maine	673,100	334,198	I. . 9,881	912,487	I. . 34,514	1,246,685	0	0	1,319,785				
New Hampshire	14,968	58,628	I. . 3,799	603,580	I. . 30,438	724,451	11,848	11,848	751,267				
Vermont	67,550	0	I. . 0	603,580	I. . 87,924	693,580	41,859	41,859	712,989				
Massachusetts	282,081	0	I. . 0	8,129,720	I. . 801,234	8,129,720	2,346	2,346	8,414,147				
Rhode Island	20,607	107,365	I. . 5,108	787,738	I. . 26,068	895,103	64,857	64,857	980,567				
Connecticut	162,855	238,861	I. . 2,996	1,533,902	I. . 21,360	1,772,763	80,049	80,049	2,015,667				
New York	272,177	3,259,519	I. . 66,885	13,407,115	I. . 1,870,647	16,666,684	872,473	872,473	17,811,284				
New Jersey <i>d</i>	132,262	1,938,235	I. . <i>e</i> 69,180	1,251,570	I. . 138,269	3,190,805	3,323,967	3,323,967	3,323,967				
Pennsylvania	2,260	1,492,664	I. . 6,705	10,673,719	I. . 1,029,612	12,166,383	1,927,474	1,927,474	14,093,857				
South Atlantic Division:													
Delaware <i>f</i>	60,607	<i>g</i> 4,656	Small	185,994	I. . <i>h</i> 12,473	190,650	0	0	251,257				
Maryland	52,805	563,400	I. . 40,349	1,039,463	I. . 26,863	1,602,863	133,324	133,324	1,788,992				
District of Columbia	0	4,452,889	I. . 21,954	452,889	I. . 21,954	905,778	0	0	905,778				
Virginia <i>d</i>	107,934	729,739	I. . 54,026	702,718	I. . 14,344	1,439,457	40,994	40,994	1,588,385				
West Virginia	21,080	345,549	I. . 79,244	871,675	I. . 133,539	1,217,224	60,010	60,010	1,298,324				
North Carolina	0	558,773	I. . <i>h</i> 3,252	15,647	I. . <i>b</i> 6,353	574,430	147,336	147,336	721,756				
South Carolina <i>d</i>	0	372,019	I. . 10,633	56,318	I. . 5,756	498,337	21,500	21,500	449,837				
Georgia <i>j</i>	<i>k</i> 152,046	424,740	I. . <i>l</i> 173,348	319,410	I. . 21,569	744,150	124,166	124,166	1,029,372				
Florida	32,674	84,103	I. . 8,103	399,756	I. . 36,266	483,859	0	0	516,533				
South Central Division:													
Kentucky <i>d</i>	108,297	1,201,872	I. . 29,273	774,987	I. . 139,407	1,976,859	125,000	125,000	2,210,096				
Tennessee	152,007	1,596,126	I. . 32,443	<i>b</i> 237,000	I. . 1,533,126	1,772,706	87,573	87,573	1,772,706				
Alabama	143,938	465,729	I. . 77,868	<i>b</i> 290,000	I. . 755,729	899,782	115	115	899,782				
Mississippi <i>d</i>	75,073	439,959	I. . 6,871	437,383	I. . 19,503	877,342	210,869	210,869	1,088,211				
Louisiana	47,751	254,882	I. . 8,925	296,656	I. . 56,213	591,538	213,767	213,767	813,056				
Texas	885,000	1,677,773	I. . <i>h</i> 186,754	377,147	I. . <i>b</i> 34,801	2,034,920	269,045	269,045	3,208,965				
Arkansas	640,481	495,631	I. . 96,823	545,843	I. . 42,027	1,041,474	13,880	13,880	1,095,353				
North Central Division:													
Ohio	243,293	1,738,745	I. . 56,776	8,198,839	I. . 302,636	9,937,584	262,656	262,656	10,443,533				

Indiana.....	608,383	1,444,779	I..	14,405	3,078,383	I..	306,040	4,528,162	440,569	5,572,124
Illinois.....	709,651	1,000,000	I..	0	8,828,120	I..	383,559	9,828,120	1,428,101	11,965,872
Michigan.....	302,489	489,393	D..	32,807	4,110,035	I..	42,450	4,590,428	782,620	5,664,537
Wisconsin.....	416,000	625,341	I..	19,105	2,902,142	I..	194,854	3,597,483	334,643	4,022,126
Minnesota.....	337,245	479,443	I..	41,838	2,848,522	I..	575,856	3,927,965	857,561	4,522,771
Iowa.....	266,338	0	I..	0	5,918,653	I..	64,404	5,918,653	m 651,885	6,836,876
Missouri.....	855,344	657,530	I..	73,566	3,267,200	D..	345,745	3,494,730	235,733	5,015,867
North Dakota.....	56,104	71,019	D..	3,177	3,441,152	I..	15,417	512,171	34,404	601,679
South Dakota.....	0	174,687	D..	7,707	9,950,448	D..	86,964	1,128,135	34,078	1,179,213
Nebraska.....	481,000	0	I..	0	1,717,619	I..	150,787	1,863,649	930,503	3,277,152
Kansas.....	306,982	0	I..	0	3,572,340	D..	53,066	3,572,340	364,988	4,244,310
Western Division:										
Montana.....	0	0	I..	0	359,716	I..	46,772	359,716	27,318	387,034
Wyoming.....	0	0	I..	0	140,000	I..	0	140,000	0	140,000
Colorado.....	112,702	0	I..	0	1,480,947	I..	208,388	1,480,947	571,749	2,165,398
New Mexico.....	0	0	I..	0	85,015	I..	0	91,989	6,644	98,633
Arizona.....	0	6,974	Small	1,713	170,267	I..	24,458	172,050	0	172,050
Utah.....	28,017	1,783	D..	6,130	123,774	I..	9,274	258,250	58,125	345,392
Nevada.....	51,938	135,476	I..	1,132	119,354	I..	4,170	132,027	134,496	184,496
Idaho.....	0	12,673	D..	0	162,555	I..	5,561	162,555	3,225	165,780
Washington.....	0	0	I..	0	688,786	I..	112,035	688,786	302,832	971,618
Oregon.....	151,188	0	I..	0	656,404	I..	52,843	656,404	111,913	919,595
California.....	222,000	2,405,471	I..	109,988	2,361,401	D..	147,119	4,768,872	98,092	5,086,964

a Excluding Alaska.

b Approximately.

c Estimated in part.

d In 1888-89.

e Tax rate raised from \$4 to \$5 per child.

f In 1885-86.

g State appropriation for colored schools.

h Average increase for two years.

i United States appropriation.

j In 1889.

k Including rent of State railroad.

l Effect of the new State appropriation.

m Includes receipts from sale of bonds, if any.

n Includes all receipts in cities.

o In 1887-88.

TABLE 10.—Showing the amount of school revenue from different sources per capita of the total population; also, percentage of the total revenue derived from each source—all for 1889-90, except where otherwise noted.

State or Territory.	Revenue per capita of the total population from—					Percentage of the total revenue derived from—			
	Permanent funds and rents.	State taxes.	Local taxes.	Other sources.	Total revenue.	Permanent funds and rents.	State taxes.	Local taxes.	Other sources.
1	2	3	4	5	6	7	8	9	10
The United States <i>a</i>	\$0.12	\$0.42	\$1.55	\$0.20	\$2.29	<i>Per ct.</i> 5.45	<i>Per ct.</i> 18.30	<i>Per ct.</i> 67.89	<i>Per ct.</i> 8.33
North Atlantic Division.....	.06	.43	2.18	.17	2.84	2.07	15.04	76.82	6.07
South Atlantic Division.....	.05	.40	.46	.05	.96	5.00	41.39	47.43	6.18
South Central Division.....	.13	.53	.27	.09	1.02	13.01	52.22	26.51	8.26
North Central Division.....	.19	.31	2.05	.28	2.83	6.83	10.78	72.37	10.02
Western Division.....	.19	.85	2.08	.39	3.51	5.32	24.08	59.49	11.11
North Atlantic Division:									
Maine.....	<i>b</i> .11	.51	1.38	0	2.00	65.54	25.32	69.14	0
New Hampshire.....	.04	.16	1.77	.03	2.00	1.99	7.80	88.64	1.57
Vermont <i>c</i>.....	.20	0	1.82	.13	2.15	9.47	0	81.64	5.89
Massachusetts.....	.13	0	3.62	.01	3.76	3.35	0	96.62	.03
Rhode Island.....	.06	.31	2.28	.19	2.81	2.10	10.95	80.33	6.62
Connecticut.....	.22	.32	2.06	1.02	2.70	8.08	11.85	76.10	3.97
New York.....	.05	.54	2.24	.14	2.97	1.53	18.20	75.27	4.90
New Jersey <i>d</i>.....	.09	1.38	.89	0	2.36	3.98	58.36	37.66	0
Pennsylvania.....	0	.28	2.03	.37	2.68	0	10.59	75.75	13.66
South Atlantic Division:									
Delaware <i>e</i>.....	.38	<i>f</i> .03	1.17	0	1.58	24.12	<i>f</i> 1.85	74.03	0
Maryland.....	.05	.54	1.00	.12	1.71	2.95	31.49	58.10	7.46
District of Columbia.....	0	<i>g</i> 1.97	1.97	0	3.93	0	<i>g</i> 50.00	50.00	0
Virginia <i>d</i>.....	.07	.45	.43	.02	.97	6.79	45.93	44.68	2.60
West Virginia.....	.03	.45	1.14	.08	1.70	1.02	26.61	67.13	4.64
North Carolina.....	0	.35	.01	.09	.45	0	77.42	2.17	20.41
South Carolina <i>d</i>	0	.33	.05	.02	.40	0	82.70	12.52	4.78
Georgia <i>h</i>.....	.08	.24	1.18	.07	.57	14.90	41.63	31.31	12.16
Florida.....	.08	.21	1.01	0	1.32	6.34	16.28	77.38	0
South Central Division:									
Kentucky <i>d</i>.....	.06	.66	.42	.07	1.21	4.90	54.38	35.07	5.65
Tennessee.....	.09	.73	<i>b</i> 1.13	.05	1.00	8.57	73.12	613.37	4.94
Alabama.....	.09	.31	<i>b</i> 1.19	Small	.59	16.00	51.76	632.23	.01
Mississippi <i>d</i>.....	.05	.45	.34	.17	.92	6.45	37.84	37.61	18.10
Louisiana.....	.01	.23	.27	.19	.73	5.87	31.35	36.49	26.29
Texas.....	.40	.75	.17	.12	1.44	27.57	52.23	11.75	8.40
Arkansas.....	<i>b</i> .04	.44	.48	.01	.97	63.70	45.23	49.82	1.25
North Central Division:									
Ohio.....	.07	.47	2.23	.07	2.84	2.33	16.65	78.50	2.52
Indiana.....	.28	.66	1.40	.20	2.54	10.92	25.93	55.25	7.90
Illinois.....	.19	.26	2.31	.37	3.13	5.93	8.36	73.78	11.93
Michigan.....	.14	.23	1.96	.38	2.71	5.34	8.64	72.55	13.47
Wisconsin.....	<i>b</i> .09	.37	1.72	.20	2.38	63.98	15.55	72.17	8.30
Minnesota.....	.26	.37	2.19	.65	3.47	7.46	10.60	62.98	18.96
Iowa.....	.14	0	3.10	.34	3.58	3.90	0	86.56	9.54
Missouri.....	.32	.25	1.22	.08	1.87	17.06	13.11	65.13	4.70
North Dakota.....	.31	.39	2.41	.18	3.29	9.32	11.80	73.32	5.56
South Dakota.....	0	.53	2.89	.17	3.59	0	14.81	80.60	4.59
Nebraska.....	<i>b</i> .45	.14	1.62	.88	3.09	614.68	4.52	52.41	28.39
Kansas.....	.22	0	2.50	.25	2.97	7.23	0	84.18	8.59
Western Division:									
Montana.....	0	0	2.72	.21	2.93	0	0	92.94	7.06
Wyoming <i>bd</i>	0	0	2.57	0	2.57	0	0	100.00	0
Colorado.....	.27	0	3.59	1.39	5.25	5.20	0	68.39	26.41
New Mexico <i>bd</i>	0	.05	.60	.04	.69	0	7.07	86.20	6.73
Arizona.....	0	.03	2.86	0	2.89	0	1.04	98.96	0
Utah.....	.13	.65	.60	.28	1.66	8.11	39.22	35.83	16.84
Nevada.....	1.13	.28	2.61	.01	4.03	28.15	6.87	64.69	.29
Idaho.....	0	0	1.93	.03	1.96	0	0	98.06	1.94
Washington.....	0	0	1.91	.87	2.78	0	0	68.83	31.17
Oregon.....	.48	0	2.09	.36	2.93	16.44	0	71.38	12.18
California.....	<i>b</i> .18	1.99	1.95	.09	4.21	64.36	47.28	46.42	1.94
Alaska.....									

a Excluding Alaska.*b* Approximately.*c* Estimated in part.*d* In 1888-89.*e* In 1885-86.*f* State appropriation for colored schools.*g* United States appropriation.*h* In 1889.

SOURCES OF SCHOOL REVENUE.

(Tables 9 and 10.)

The total amount raised for the support of common schools in 1889-90 was \$143,110,218, being an average of \$2.29 for each person of the population.

Of this \$2.29 per capita of the population, 12 cents, or 5.45 per cent of the whole, represented the interest upon permanent invested school funds. The total amount so raised was \$7,797,927, being the income from school funds amounting to about \$129,000,000.

From State taxes were derived 42 cents per capita, or 18.30 per cent of the whole, and from local taxes \$1.55 per capita, or 67.89 per cent of the whole.

The total amount raised by taxation, then, was \$1.97 per capita of the population, or 86.19 per cent (about seven-eighths) of the total revenues. The gross amount so raised was \$123,326,866.

The remaining portion, some \$12,000,000, being 8.36 per cent of the whole, was derived from other sources than those specified in the foregoing.

Revenue from permanent funds.—Pennsylvania and North and South Carolina have no permanent school funds. In some of the new States of the West the permanent fund did not become available in season to yield any revenue for the school year 1889-90.

Of all the States, Nevada derives the largest revenue, in proportion to its population, from its permanent school fund, viz, \$1.13 per capita. This is more than twice that of any other State. There are nine States (in the South) that have a less school revenue from all sources, in proportion to their population, than Nevada gets from its permanent invested funds alone. North and South Carolina have less than half as much in all, and Georgia just about one-half.

Except Nevada, no State has a revenue from its permanent fund of more than 50 cents per capita. Texas, Nebraska, and Oregon have between 40 and 50 cents (Table 10, column 2). Delaware has 38 cents.

Texas has the largest absolute income from its school fund, amounting to \$885,000. Missouri has also over \$800,000, and Illinois over \$700,000. The latter State, however, depends less on its school fund, raising about sixteen times as much in other ways, whereas Texas raises by taxation, etc., less than three times as much as its school fund yields.

In the North Atlantic States an average of only about 2 per cent of the total revenue comes from permanent funds; in the South Central States 13 per cent.

State school taxes.—A State tax, as here understood, is a tax levied on all the property of the State, the proceeds of which are distributed among the counties, towns, or districts in the main according to the number of children of school age.

The object of this tax is to equalize the burden of school taxation. The richer counties, towns, etc., are made through it to contribute of their surplus; the poorer receive, and are thus enabled to prolong their school term to any required statutory limit without having recourse to excessive local taxation.

State taxes are, almost without exception, devoted by legislative enactments solely to maintaining the schools; in fact, are generally limited to paying teachers' salaries. All funds for building and equipping must be raised locally. The proceeds of any State's tax, together with the income from its permanent school fund, combined in some cases with other miscellaneous funds, constitute generally the "State apportionment."

In some States, instead of a State school tax being levied, an appropriation in bulk is made from the State treasury. This has the same effect as a tax specially levied for schools.

The theory of the State tax has now been accepted by nearly all the States of the Union. Indeed, in most of the Southern and some of the Western States the State tax dates from the origin of the system, and to-day State moneys furnish the main, if not the whole, support of the country schools of certain sections of the South. It has been gradually adopted by the Northern States, until now Vermont, Massachusetts, Iowa, Kansas, Colorado, Oregon, and some of the recently admitted States are the only ones which have no distinctively State tax.

The legislatures of Rhode Island, Pennsylvania, Georgia, Alabama, and Illinois appropriate a lump sum annually instead of levying a State tax. In nearly all these States the appropriation has been from time to time increased. Georgia increased its State appropriation in 1889 by \$165,000, and again in 1890 by \$215,000. Pennsylvania subsequent to the date of this Report has largely added to its State appropriation. (The State appropriation of Pennsylvania for 1890-91 was \$2,000,000 and that for 1891-92 was \$5,000,000.)

The tendency in the North is to regard State aid as an auxiliary agency having a well-defined function, but to keep it within restricted bounds. In education, as in the other departments of human activity, it is self-help that stimulates the healthiest and most vigorous growth and leads to the most enduring results. A realizing sense of this truth has led to the practice in the North of being somewhat chary in the matter of giving State aid. Enough is furnished to tone down the harsher inequalities of local taxation and to afford a stimulus and an encouragement to the people in the poorer localities to do for themselves.

Still, the figures show (Table 10, column 3) that the North raises in the shape of State taxes per capita about as much as the South. The difference between the two sections is that in the North the State tax is a mere auxiliary, as before stated; in the South the proceeds of it, together with the income from the invested school funds, is the main—in

the country often the only—source of school support, and generally an inadequate one. What is a merely incidental source of supply in the North is made in the South the chief reliance.

To be more explicit: Combining the income from permanent funds of column 7, Table 10, with the State taxes of column 8, which together make up the bulk of the State apportionments of school moneys, it will be seen that in the North Atlantic Division the States furnish 17.11 per cent, and in the North Central Division 17.61 per cent, of the total school revenue, the remainder being locally furnished; so it may be said that in the North the States furnish on an average about one-sixth of the school support, and in the present temper of the governing authorities it is not likely that this proportion will be largely exceeded, though the falling into line of the States which as yet have no State tax will increase the average slightly, perhaps to 20 per cent. This may be regarded as the present-day opinion in the North as to the maximum of what the State should do for the direct financial support of the schools, *i. e.*, one-fifth of the whole, leaving four-fifths to local enterprise.

On the other hand, in the South Atlantic States, the State apportionments, while being about as much per capita of population as in the North, comprise 46.39 per cent, and in the South Central States 65.23 per cent, of the total school revenues; *i. e.*, the Southern States furnish about as much State moneys per capita, on the whole, as the Northern, but in the South the local or extra-State revenues are very meager, as will be seen from column 4, where it is shown that the States of the northern divisions raise on an average over \$2 per capita of population in local taxes, and those of the two Southern divisions on an average about 36 cents (46 and 27 cents).

These figures emphasize the difference in the school systems of the two sections, viewed in their financial bearings. It may be also realized from a consideration of the following: The three divisions comprising the Northern and Pacific States contain about 43,000,000 people and raise about \$90,000,000 in local school taxes; the two Southern divisions contain about 20,000,000 inhabitants and raise \$7,000,000 local school taxes. That is, the former group, with only about twice the number of people that the latter has, raises about thirteen times as much local school taxes.

The school financial system of California is especially noticeable; that State has not only pushed State control of text-books to its extreme limit, but it furnishes direct support to its schools to the extent of \$1.99 per capita of population, more than three times as much as any other State, except New Jersey, with its \$1.38 per capita; Tennessee, 73 cents per capita, and Texas, 75 cents. But the so-called State tax of New Jersey is not a State tax in the proper sense of the term, since 90 per cent of it is returned to the counties where collected. Indiana and Kentucky raise 66 cents per capita in State taxes; New York and Maryland, 54 cents; South Dakota, 53 cents, and Maine, 51 cents.

The above ten are the only States that raise over 50 cents per capita in State taxes.

As to Kentucky—Enough State aid.—Superintendent Thompson, after showing how much the State aid has increased of late years, goes on to say: "All this, however, has not brought about that result on which depends the ultimate success of the public-school system, namely, a corresponding increase in local aid;" what there is, is contributed mainly by the cities; "of that contributed by the counties, but a small proportion was used for increasing the salaries of teachers and lengthening the school term, the rest representing incidental expenses, schoolhouse-buildings, etc. * * * It has come to be a matter of common complaint, therefore, that the State bonus is so great as to deter local effort, the people being able to employ teachers for the minimum (statutory) school term by payment of the amount drawn from the public (State) treasury. The remedy for this suicidal policy is not to be found in an increase of the State fund, * * * but in that general awakening of the people to their vital interests, which will incline them to contribute liberally of their own means, by subscription and by local taxation. * * * While Kentucky as a State has made noble provision for her pupil children, the fullest benefits of her munificence can never be realized until every community is alive to the fact that its progress, its prosperity, its very safety depend upon local effort, local means, local supervision. Few States have as large a school *per capita* as Kentucky, derived directly from taxation; but many maintain a public-school system strong, efficient, progressive, by means of city, county, and district taxation and subscription. With them, the State *per caput* is the least important consideration."

In some parts of the South the "State poll tax" is retained in the counties where collected, so that it is not a State tax in the most restricted sense of the term. Neither is it a voluntary local tax. It has been deemed best on the whole to keep it classed with State taxes, to which it seems most nearly allied.

Local taxes.—The amount of local school tax measures in a general way the amount of local interest taken in the schools, and hence indicates the vigor and efficiency with which they are conducted.

As California is preëminently the home of the State tax, so is Massachusetts, though not in so marked a degree as compared with other States, the home of the local tax. Massachusetts raised in 1889-90 in local taxes \$3.62 per capita of population, or 96.62 per cent of its total school revenue. The remaining 3.38 per cent was the income of its small school fund, except an insignificant sum derived from voluntary contributions. The average local tax for the United States is \$1.55 per capita.

Colorado, with \$3.59 per capita local taxes, closely approximates to Massachusetts, and Iowa in a less degree with \$3.10. The above three are the only States having over \$3.

The meager local school taxes of the South have been before adverted to. The figures of column 4 of Table 10 confirm the conclusions that may be deduced from a general study of the situation, viz, that the common schools of the South outside the larger cities are an exotic growth, springing up under the stimulus of sustenance received from the State treasury, and are not the indigenous products of the soil.

North Carolina raises in local taxes for common schools only 1 cent per capita of population: South Carolina, 5 cents; Georgia, 18 cents; Tennessee, 13 cents; Alabama, 19 cents; and Texas, 17 cents.

It is proper to say, however, that all the local school taxes of the Southern States are not reported to the respective State superintendents, and consequently by them to this Office. Effort has been made to supply the omissions, when known to occur, by having recourse to city reports or to estimates. Contributions to an unknown extent are also made in the shape of labor and material for building schoolhouses, rent of buildings for school purposes, etc. All these items taken into consideration, however, would not alter to any considerable extent the figures given.

TABLE 11.—*School expenditure of 1870, 1880, and 1890 compared.*

State or Territory.	Total expenditure for common schools.			Total expenditure per capita of population.		
	1870.	1880.	1890	1870.	1880.	1890.
1	2	3	4	5	6	7
United States.....	\$63,396,666	\$78,094,687	\$140,277,484	\$1.64	\$1.56	\$2.24
North Atlantic Division.....	28,395,892	28,538,058	48,006,369	2.31	1.97	2.76
South Atlantic Division.....	2,757,505	5,130,492	8,519,873	.47	.68	.96
South Central Division.....	3,082,166	4,872,829	10,796,864	.48	.55	.98
North Central Division.....	27,158,254	35,285,635	62,823,563	2.09	2.03	2.81
Western Division.....	2,002,759	4,267,673	10,130,815	2.02	2.41	3.25
North Atlantic Division:						
Maine.....	1,009,875	1,067,991	1,327,553	1.61	1.65	2.01
New Hampshire.....	a428,000	565,339	844,333	a1.34	1.63	2.24
Vermont.....	487,481	446,217	711,072	1.47	1.24	2.14
Massachusetts.....	5,073,635	4,983,900	8,286,062	3.48	2.89	3.70
Rhode Island.....	529,054	526,112	884,566	2.43	1.90	2.56
Connecticut.....	1,621,383	1,468,375	2,157,014	3.02	2.26	2.89
New York.....	9,905,514	10,296,977	17,543,880	2.26	2.03	2.92
New Jersey.....	1,664,650	1,873,465	b3,323,667	1.84	1.66	b2.26
Pennsylvania.....	7,676,286	7,369,682	12,928,422	2.18	1.72	2.46
South Atlantic Division:						
Delaware.....	127,729	207,281	c246,718	1.02	1.41	c1.51
Maryland.....	1,199,226	1,544,367	1,910,663	1.52	1.65	1.83
District of Columbia.....	439,929	458,567	905,777	3.34	2.47	5.93
Virginia.....	98,770	946,109	1,606,509	.08	.63	.97
West Virginia.....	470,129	707,553	1,198,493	1.06	1.14	1.57
North Carolina.....	a80,000	376,062	714,900	a.07	.27	.44
South Carolina.....	a165,000	324,629	b460,399	a.23	.23	b.41
Georgia.....	109,423	471,029	d959,881	.09	.31	d.53
Florida.....	76,389	114,895	516,533	.41	.43	1.32
South Central Division:						
Kentucky.....	1,150,451	1,063,030	2,260,467	.87	.65	1.22
Tennessee.....	683,008	744,180	1,526,241	.54	.48	.86
Alabama.....	275,000	500,000	890,000	.28	.40	.59
Mississippi.....	(c)	830,705	1,107,970	(e)	.73	.86
Louisiana.....	473,707	411,858	817,110	.65	.44	.73
Texas.....	(c)	a1,030,000	3,178,300	(e)	a.65	1.42
Arkansas.....	a500,000	287,056	1,016,776	a1.03	.36	.90
North Central Division:						
Ohio.....	a6,726,872	7,166,963	10,602,238	a2.25	2.24	2.89
Indiana.....	2,784,056	4,491,850	5,245,218	1.66	2.27	2.39

a Approximately.

b In 1883-89.

c In 1887-88.

d In 1889.

e Public-school system not yet established.

TABLE 12.—*School expenditure of 1870, 1880, and 1890 compared—Continued.*

State or Territory.	Total expenditure for common schools.			Total expenditure per capita to population.		
	1870.	1880.	1890.	1870.	1880.	1890.
1	2	3	4	5	6	7
North Central Division— Con'd.						
Illinois	\$6,501,445	\$7,014,092	\$11,645,126	\$2.56	\$2.28	\$3.04
Michigan	2,683,943	2,775,917	5,349,366	2.27	1.70	2.55
Wisconsin	2,094,160	2,177,023	3,801,212	1.98	1.65	2.25
Minnesota	942,825	1,328,429	4,187,310	2.14	1.70	3.22
Iowa	3,043,420	4,484,043	6,582,953	2.55	2.76	3.34
Missouri	a1,490,000	2,675,364	4,434,262	a.87	1.23	2.03
North Dakota	} a15,000	245,000	626,949	} a1.06	1.81	3.43
South Dakota			1,199,630			3.65
Nebraska	163,931	1,108,617	3,376,332	1.33	2.45	3.19
Kansas	712,602	1,818,337	4,972,967	1.96	1.83	3.49
Western Division:						
Montana	32,925	78,730	364,084	1.60	2.01	2.76
Wyoming	2,876	28,504	a b140,000	.32	1.37	a b2.86
Colorado	55,763	395,227	1,681,379	1.40	2.87	4.08
New Mexico	1,000	28,973	a c87,000	.01	.36	a c.61
Arizona	(d)	61,172	181,914	(d)	1.10	3.05
Utah	a118,000	132,194	394,685	a1.36	1.38	1.90
Nevada	73,837	220,245	161,481	1.74	3.54	3.53
Idaho	16,178	38,411	169,020	1.08	1.18	2.09
Washington	33,746	112,615	958,111	1.41	1.50	2.74
Oregon	139,387	307,031	805,979	1.53	1.76	2.57
California	1,529,047	2,864,571	5,187,162	2.73	3.31	4.29

a Approximately.

b In 1887-88.

c In 1888-89.

d Public-school system not yet established.

TABLE 12.—Public-school expenditures, mainly for 1889-90, compared with those of the preceding year.

State or Territory.	Permanent expenditure.			Current expenditure.				Total expenditure for public school purposes. <i>a</i>	Increase or decrease since preceding year.	Percent- age of increase or de- crease.
	Expended for sites, buildings, furniture, libraries, and appa- ratus.	3	4	For salaries of teachers and super- intendents.	6	7	8			
1	2	Dollars.	Per cent.	Dollars.	Dollars.	Per cent.	Dollars.	Dollars.	10	11
The United States <i>b</i>	26,291,796	I.. 2,707,049	I... 11.48	91,683,338	I.. 4,390,075	I.... 5.03	22,302,350	140,277,484	I.. 7,688,356	I... 5.80
North Atlantic Division.....	10,860,263	I.. 2,311,472	I... 27.04	28,835,490	I.. 1,246,850	I.... 4.52	8,310,616	48,006,360	I.. 3,909,874	I... 8.87
South Atlantic Division.....	1,058,183	D.. 217,286	D... 17.04	6,603,627	I.. 377,455	I.... 6.06	858,063	8,519,873	I.. 50,974	I... .60
South Central Division.....	1,121,068	I.. c 25,408	I... 2.32	8,794,799	I.. 422,694	I.... 5.05	880,467	10,796,864	I.. 577,364	I... 5.65
North Central Division.....	10,889,794	I.. 483,857	I... 4.65	40,975,275	I.. 1,747,869	I.... 4.46	10,338,494	62,823,563	I.. 2,274,798	I... 3.76
Western Division.....	2,361,948	I.. e 103,598	I... 4.59	6,474,147	I.. e 595,247	I.... 10.13	1,294,720	10,130,815	I.. 875,346	I... 9.46
North Atlantic Division:										
Maine.....	176,252	I.. 12,602	I... 7.70	d 815,000	I.. d 5,396	I.... 0.67	336,301	1,327,553	I.. 39,905	I... 3.08
New Hampshire.....	299,552	I.. 93,784	I... 81.00	514,872	I.. 13,698	I.... 2.73	119,909	844,333	I.. 105,260	I... 14.24
Vermont.....	83,212	I.. 3,062	I... 3.82	539,202	I.. 46,612	I.... 9.46	88,658	711,072	I.. 63,851	I... 9.86
Massachusetts.....	1,382,189	I.. 571,424	I... 70.47	d 5,324,000	I.. d 151,000	I.... 2.92	1,579,873	8,286,062	I.. 775,343	I... 10.32
Rhode Island.....	210,127	D.. 12,195	D... 5.48	568,297	I.. 15,611	I.... 2.82	106,542	884,966	I.. 2,830	I... .32
Connecticut.....	376,837	I.. 29,696	I... 8.55	1,363,263	I.. 67,918	I.... 2.86	416,914	2,157,014	I.. 172,760	I... 8.71
New York.....	5,005,128	I.. 840,153	I... 20.17	10,535,168	I.. 617,323	I.... 2.62	2,003,586	17,543,880	I.. 1,516,438	I... 9.46
New Jersey <i>c</i>	678,548	I.. 88,532	I... 15.00	d 2,238,000	I.. d 91,400	I.... 4.25	406,519	3,323,087	I.. 207,626	I... 6.66
Pennsylvania.....	2,738,418	I.. 684,414	I... 33.32	6,937,690	I.. 297,892	I.... 4.01	f 3,252,314	12,928,422	I.. 1,026,161	I... 8.62
South Atlantic Division:										
Delaware <i>g</i>	h 18,112	D.. 4,969	D... 21.53	202,893	I.. 12,893	I.... 6.97	25,713	246,718	D.. i 11,282	D... 4.37
Maryland.....	167,429	D.. 23,494	D... 12.31	1,492,369	I.. 61,864	I.... 4.33	250,865	1,910,663	I.. 57,897	I... 3.13
District of Columbia.....	254,579	D.. 77,668	D... 23.38	513,101	I.. 42,991	I.... 9.15	138,997	966,777	D.. 38,863	D... 4.11
Virginia.....	155,454	D.. 33,967	D... 17.94	1,313,724	I.. 37,311	I.... 2.92	137,331	1,606,509	D.. 14,300	D... .88
West Virginia.....	171,453	D.. 58,478	D... 25.43	853,204	I.. 35,877	I.... 4.39	173,836	1,198,493	D.. 85,260	D... 6.64
North Carolina.....	73,620	D.. 21,634	D... 41.92	574,747	I.. 1,856	I.... 3.33	66,533	714,900	I.. i 11,900	I... 1.69
South Carolina <i>e</i>	41,300	I.. 13,292	I... 46.99	404,584	D.. 11,782	D.... 2.83	14,515	460,399	D.. 35	D... .01
Georgia <i>j</i>	k 77,730	D.. 66,235	D... 46.00	876,931	I.. 170,171	I.... 24.08	5,220	959,881	I.. 90,876	I... 10.46
Florida.....	98,506	I.. 12,689	I... 14.79	372,074	I.. 26,274	I.... 7.60	45,953	516,533	I.. 40,043	I... 8.40

a Excluding debt paid.*b* Excluding Alaska.*c* In making this summary the States not reporting are estimated.*d* Approximately.*e* In 1888-89.*f* Including debt paid.*g* In 1887-88.*h* City of Wilmington only.*i* Average annual increase for two years.*j* In 1889.*k* For schools under local laws only. Includes some miscellaneous expenditure.

TABLE 12—Public-school expenditures, mainly from 1889-90, compared with those of the preceding year.

State or Territory.	Permanent expenditure.			Current expenditure.			Total expenditure for public school purposes, <i>a</i>			Increase or decrease since preceding year.	Percent- age of increase or de- crease.
	Expend- ed for sites, buildings, furniture, libraries, and appa- ratus.	Increase or decrease since preceding year.	Per cent.	For salaries of teachers and super- intendents.	Increase or decrease since preceding year.	Per cent.	Other en- rent ex- penditure.	Dollars.	Dollars.		
	2	3	4	5	6	7	8	9	10	11	
South Central Division:											
Kentucky	254,337	D. 66,493	D. 20.72	1,906,162	I. 189,611	I. 11.04	99,948	2,250,497	I. 107,289	I. 4.98	
Tennessee	225,602	I. 215,836	I. 95.82	600,000	I. 6,000	I. 1.00	84,803	1,290,241	I. 50,000	I. 3.86	
Alabama <i>b</i>	150,000	I. 13,049	I. 11.16	933,591	I. 2,615	I. .27	80,000	1,070,970	I. 9,141	I. .85	
Mississippi	139,000	I. 23,514	I. 16.92	545,959	I. 4,844	I. .88	243,833	1,171,592	I. 112,524	I. 9.57	
Louisiana	28,218	I. 635,591	I. 22.64	2,631,252	I. 108,004	I. 4.07	378,300	3,178,300	I. 186,067	I. 5.85	
Texas	221,720	I. 11,017	I. 11.61	869,899	I. 30,893	I. 3.55	35,166	1,016,776	I. 49,167	I. 4.83	
Arkansas	111,711	I. 290,417	I. 24.24	6,976,722	I. 216,324	I. 3.10	2,137,041	10,602,238	I. 508,532	I. 4.78	
North Central Division:											
Ohio	1,468,475	I. 744,491	I. 50.74	4,100,614	I. 14,415	I. .35	460,113	5,245,218	I. 287,392	I. 5.48	
Indiana	2,359,111	I. 26,811	I. 1.13	7,349,044	I. 434,655	I. 5.93	1,936,971	11,645,126	I. 422,391	I. 3.62	
Illinois	894,530	I. 252,869	I. 28.27	3,323,832	I. 130,347	I. 3.95	1,130,951	5,349,366	I. 396,842	I. 7.41	
Michigan	632,369	D. 18,799	D. 2.93	2,567,407	I. 78,721	I. 3.06	601,436	3,801,212	I. 56,222	I. 1.48	
Wisconsin	724,286	D. 181,105	D. 20.00	2,528,099	I. 321,308	I. 12.71	934,415	4,187,310	I. 144,052	I. 3.44	
Minnesota	892,550	D. 15,112	D. 1.67	4,318,371	I. 122,709	I. 2.85	1,171,592	6,382,953	I. 100,444	I. 1.58	
Iowa	1,054,384	I. 515,023	I. 48.83	3,472,225	I. 251,961	I. 7.25	907,633	5,434,262	I. 881,799	I. 16.23	
Missouri	84,982	D. 293,490	D. 34.46	381,472	I. 2,842	I. .75	160,465	626,949	I. 28,029	I. 4.48	
North Dakota	147,415	D. 2,007	D. 1.34	4,808,792	I. 22,140	I. .45	243,513	1,190,630	I. 15,035	I. 1.24	
South Dakota	915,894	D. 263,281	D. 28.53	2,126,661	I. 163,568	I. 7.70	333,777	3,576,332	I. 114,630	I. 3.19	
Nebraska	951,297	D. 132,190	D. 13.79	3,021,066	I. 34,162	I. 1.14	1,000,604	4,972,967	I. 164,494	I. 3.29	
Kansas	104,571	I. 57,297	I. 54.85	226,508	I. 9,508	I. 4.19	33,005	364,084	I. 38,467	I. 10.55	
Western Division:											
Montana	25,000	I. 607,503	I. 24.31	100,000	I. 103,632	I. 10.36	15,000	140,000	I. 21,100	I. 15.00	
Wyoming <i>b</i>	6,000	I. 14,183	I. 23.63	66,000	I. 12,902	I. 19.55	255,271	1,081,379	I. 174,037	I. 16.11	
Colorado	54,306	I. 85,047	I. 155.36	127,608	I. 8,052	I. 6.31	15,000	87,000	I. 58,400	I. 66.57	
New Mexico <i>b</i>	149,672	I. 131,577	I. 87.91	193,951	I. 252	I. .13	181,914	394,685	I. 109,829	I. 27.85	
Arizona	109,672	D. 10,345	D. 9.41	135,800	I. 6,102	I. 4.49	161,481	169,020	I. 10,869	I. 6.30	
Utah	149,672	I. 131,577	I. 87.91	193,951	I. 252	I. .13	181,914	394,685	I. 109,829	I. 27.85	
Nevada	109,672	D. 10,345	D. 9.41	135,800	I. 6,102	I. 4.49	161,481	169,020	I. 10,869	I. 6.30	
Idaho	26,550	I. 94,591	I. 354.36	442,678	I. 128,084	I. 28.93	147,942	958,111	I. 302,469	I. 31.61	
Washington	367,491	I. 61,728	I. 16.52	578,761	I. 58,156	I. 10.03	34,221	805,979	I. 130,744	I. 16.28	
Oregon	192,997	I. 817,513	I. 420.02	3,662,654	I. 236,197	I. 6.45	706,905	5,187,162	I. 124,031	I. 2.45	
California	817,513	D. 211,350	D. 25.84	2,662,654	I. 236,197	I. 8.87	706,905	5,187,162	I. 124,031	I. 2.45	
Alaska											

a Excluding debt paid.*b* Approximately.*c* Average annual increase for two years.*d* Including all expenses in ethics.*e* In 1887-88.*f* In 1888-89.

TABLE 13.—Per capita expenditure of money for public-school purposes, mainly for 1889-90.

State or Territory.	Average amount expended per capita of total population for—				Average expenditure per pupil for—			
	Sites, build- ings, furni- ture, etc.	Salaries of su- perin- tend- ents and teach- ers.	Other current pur- poses.	Total expend- iture. ^a	Sites, build- ings, furni- ture, etc.	Salaries of teach- ers and su- perin- tendents.	Other current pur- poses.	Total expend- iture. ^a
1	2	3	4	5	6	7	8	9
The United States ^b	\$0.42	\$1.46	\$0.36	\$2.24	\$3.23	\$11.26	\$2.73	\$17.22
North Atlantic Division .....	.62	1.66	.48	2.76	5.33	14.16	4.09	23.58
South Atlantic Division .....	.12	.75	.09	.96	.95	5.92	.76	7.63
South Central Division .....	.10	.80	.08	.98	.76	5.98	.60	7.54
North Central Division .....	.49	1.83	.49	2.81	3.42	12.83	3.43	19.70
Western Division .....	.78	2.14	.43	3.35	7.10	19.46	3.89	30.45
North Atlantic Division:								
Maine .....	.27	c1.23	.51	2.01	1.79	c8.28	3.43	13.50
New Hampshire .....	.56	1.37	.31	2.24	5.05	12.40	2.88	20.33
Vermont .....	.25	1.62	.27	2.14	1.81	11.75	1.94	15.50
Massachusetts .....	.62	c2.38	.70	3.70	5.05	c19.44	5.77	30.26
Rhode Island .....	.61	1.64	.31	2.56	6.20	16.76	3.14	26.10
Connecticut .....	.50	1.83	.56	2.89	4.50	16.30	4.99	25.79
New York .....	.85	1.76	.31	2.92	7.78	16.38	3.12	27.28
New Jersey ^d.....	.48	c1.59	.29	2.36	4.87	c16.07	2.92	23.86
Pennsylvania .....	.52	1.32	.62	2.46	4.01	10.16	4.76	18.93
South Atlantic Division:								
Delaware ^e	f.11	1.24	.16	1.51	f.85	9.54	1.21	11.60
Maryland .....	.16	1.43	.24	1.83	1.64	14.58	2.45	18.67
District of Columbia	1.10	2.23	.60	3.93	9.03	18.20	4.91	32.14
Virginia .....	.09	.79	.09	.97	.78	6.62	.70	8.10
West Virginia .....	.22	1.12	.23	1.57	1.41	7.01	1.43	9.85
North Carolina .....	.05	.36	.03	.44	.36	2.83	.33	3.52
South Carolina ^d.....	.04	.36	.01	.41	.30	2.97	.11	3.28
Georgia ^g.....	.04	.49	.01	.53	.34	3.81	.02	4.11
Florida .....	.25	.95	.12	1.32	1.52	5.74	.71	7.97
South Central Division:								
Kentucky .....	.14	1.03	.05	1.22	1.10	8.24	.44	9.78
Tennessee .....	.13	.69	.04	.86	.70	3.76	.26	4.72
Alabama .....	.10	.44	.05	.59	.82	3.62	.44	4.88
Mississippi .....	.10	.75	.01	.86	.65	4.81	.06	5.52
Louisiana .....	.03	.49	.21	.73	c.30	c5.74	c2.56	c8.69
Texas .....	.10	1.18	.14	1.42	.76	9.01	1.11	10.89
Arkansas .....	.10	.77	.03	.90	.75	5.85	.24	6.84
North Central Division:								
Ohio .....	.41	1.90	.58	2.89	2.71	12.70	3.89	19.30
Indiana .....	.34	1.87	.18	2.39	2.18	11.98	1.17	15.33
Illinois .....	.62	1.92	.50	3.04	4.38	13.65	3.60	21.63
Michigan .....	.43	1.59	.53	2.55	3.17	11.79	4.01	18.97
Wisconsin .....	.37	1.52	.36	2.25	3.16	12.81	2.99	18.96
Minnesota .....	.56	1.94	.72	3.22	5.70	10.99	7.36	32.96
Iowa .....	.47	2.26	.61	3.34	2.91	14.10	3.83	20.84
Missouri .....	.39	1.30	.34	2.03	2.74	9.03	2.36	14.13
North Dakota .....	.47	2.09	.87	3.43	4.11	18.43	7.76	30.30
South Dakota .....	.45	h 2.46	.74	3.65	3.05	h 16.74	5.03	24.82
Nebraska .....	.86	2.01	.32	3.19	6.27	14.55	2.28	23.10
Kansas .....	.67	2.12	.70	3.49	3.10	12.42	4.11	20.44
Western Division:								
Montana .....	.79	1.71	.26	2.76	9.87	21.38	3.11	34.36
Wyoming ^c.....	.51	2.04	.31	2.86	5.81	23.25	3.49	32.55
Colorado	1.47	1.99	.62	4.08	15.69	21.15	6.59	43.43
New Mexico ^c.....	.04	.46	.11	.61	.50	5.50	1.25	7.25
Arizona .....	.91	2.14	.....	3.05	11.55	27.13	.....	38.68
Utah .....	.72	.93	.25	1.90	7.14	9.25	2.44	18.83
Nevada .....	.23	2.97	.33	3.53	2.04	26.82	3.02	31.88
Idaho .....	.31	1.44	.25	2.00	2.79	12.80	2.20	17.79
Washington	1.05	1.27	.42	2.74	9.95	11.98	4.00	25.93
Oregon .....	.62	1.84	.11	2.57	4.45	13.36	.79	18.60
California .....	.68	3.03	.58	4.29	5.58	24.98	4.82	35.38
Alaska								

^a Excluding debt paid.^b Excluding Alaska.^c Approximately.^d In 1888-89.^e In 1887-88.^f City of Wilmington only.^g In 1889.^h Includes all expenditures in cities.

TABLE 14.—*Percentage classification of public school expenditure, showing the per cent of the total expenditure devoted to each of the objects named.*

State or Territory.	Per cent of the total expenditure devoted to—			State or Territory.	Per cent of the total expenditure devoted to—		
	Sites, buildings, furniture, etc.	Salaries of teachers.	Other current purposes.		Sites, buildings, furniture, etc.	Salaries of teachers.	Other current purposes.
1	2	3	4	1	2	3	4
United States <i>a</i>	<i>Per ct.</i> 18.7	<i>Per ct.</i> 65.4	<i>Per ct.</i> 15.9	South Central Division— Continued.	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
North Atlantic Division.	22.6	60.1	17.3	Alabama <i>b</i>	16.9	74.1	9.0
South Atlantic Division .	12.4	77.5	10.1	Mississippi	11.7	87.2	1.1
South Central Division . .	10.4	81.4	8.2	Louisiana	3.5	66.7	29.8
North Central Division . .	17.3	65.2	17.5	Texas	7.0	82.8	10.2
Western Division.	23.3	63.9	12.8	Arkansas	11.0	85.5	3.5
North Atlantic Division:				North Central Division:			
Maine	13.3	<i>b</i> 61.4	25.3	Ohio	14.0	65.8	20.2
New Hampshire	24.8	61.0	14.2	Indiana	14.2	78.2	7.6
Vermont	11.7	75.8	12.5	Illinois	20.3	63.1	16.6
Massachusetts	16.7	<i>b</i> 64.2	19.1	Michigan	16.7	62.1	21.2
Rhode Island	23.7	64.2	12.1	Wisconsin	16.6	67.5	15.9
Connecticut	17.5	63.2	19.3	Minnesota	17.3	60.4	22.3
New York	28.5	60.0	11.5	Iowa	14.0	67.7	18.3
New Jersey <i>c</i>	20.4	<i>b</i> 67.3	12.3	Missouri	19.4	63.9	16.7
Pennsylvania	21.2	53.6	<i>f</i> 25.2	North Dakota	13.6	60.8	25.6
South Atlantic Division:				South Dakota	12.3	<i>h</i> 67.4	20.3
Delaware <i>d</i>	<i>e</i> 7.3	82.2	10.5	Nebraska	27.1	63.0	9.9
Maryland	8.8	78.1	13.1	Kansas	19.1	60.7	20.2
District of Columbia . .	28.1	56.7	15.2	Western Division:			
Virginia	9.7	81.8	8.5	Montana	28.7	62.2	9.1
West Virginia	14.3	71.2	14.5	Wyoming <i>b d</i>	17.9	71.4	10.7
North Carolina	10.3	80.4	9.3	Colorado	36.1	48.7	15.2
South Carolina <i>e</i>	9.0	88.1	2.9	New Mexico <i>b e</i>	6.9	75.9	17.2
Georgia <i>g</i>	8.1	91.4	0.5	Arizona	29.9	70.1	0
Florida	19.1	72.0	8.9	Utah	37.9	49.1	13.0
South Central Division:				Nevada	6.4	84.1	9.5
Kentucky	11.3	84.3	4.4	Idaho	15.7	71.9	12.4
Tennessee	14.8	79.7	5.5	Washington	38.4	46.2	15.4
				Oregon	24.0	71.8	4.2
				California	15.8	70.6	13.6

a Excluding Alaska.*b* Approximately.*c* In 1888-89.*d* In 1887-88.*e* City of Wilmington only.*f* Including debt paid.*g* In 1889.*h* Includes all expenses in cities.

TABLE 15.—Average cost of education per day for each pupil.

State or Territory.	Average daily expenditure for each pupil.		State or Territory.	Average daily expenditure for each pupil.	
	For salaries only.	For all purposes. <i>a</i>		For salaries only.	For all purposes. <i>a</i>
1	2	3	1	2	3
	<i>Cents.</i>	<i>Cents.</i>		<i>Cents.</i>	<i>Cents.</i>
The United States <i>b</i>	8.4	12.9	South Central Division:		
North Atlantic Division	8.5	14.1	Mississippi	5.8	6.6
South Atlantic Division	6.1	7.8	Louisiana <i>f</i>	5.7	8.5
South Central Division	6.8	8.3	Texas	9.0	10.9
North Central Division	8.7	13.3	Arkansas	7.8	9.1
Western Division	14.4	22.5	North Central Division:		
North Atlantic Division:			Ohio	7.6	11.6
Maine	7.4	12.1	Indiana	9.2	11.8
New Hampshire	10.5	17.3	Illinois	8.8	13.9
Vermont	8.6	11.4	Michigan	7.6	12.2
Massachusetts	11.0	17.1	Wisconsin	8.1	12.0
Rhode Island	8.9	13.9	Minnesota	15.6	25.8
Connecticut	8.9	14.1	Iowa	9.0	13.4
New York	8.7	14.5	Missouri	7.0	10.9
New Jersey <i>d</i>	8.5	12.6	North Dakota	16.3	26.8
Pennsylvania	6.9	12.8	South Dakota	11.5	17.1
South Atlantic Division:			Nebraska	10.4	16.5
Delaware <i>e</i>	9.9	7.2	Kansas	9.2	15.1
Maryland	7.9	10.1	Western Division:		
District of Columbia	10.2	18.1	Montana	15.0	24.0
Virginia	5.6	6.9	Wyoming <i>c d</i>	19.5	27.4
West Virginia	7.2	10.2	Colorado	14.6	30.1
North Carolina	4.8	5.9	New Mexico <i>c d</i>	8.7	11.5
South Carolina <i>d</i>	4.3	4.9	Arizona	21.5	30.7
Georgia <i>f</i>	5.4	5.9	Utah	7.0	14.2
Florida	4.8	6.6	Nevada	19.2	22.8
South Central Division:			Idaho	18.3	25.5
Kentucky	8.8	10.4	Washington	12.3	26.7
Tennessee	4.4	5.5	Oregon	11.3	15.7
Alabama	4.9	6.6	California	15.9	22.4
			Alaska		

a Excluding payments on bonded indebtedness.*d* In 1888-89.*b* Excluding Alaska.*e* In 1887-88.*c* Approximately.*f* In 1889.

SCHOOL EXPENDITURE.

(Tables 11 to 15.)

The total expenditure for common schools advanced from \$63,396,666 in 1870 to \$78,094,687 in 1880 and to \$140,277,484 in 1890.

The gain in school expenditure from 1870 to 1880 was therefore 23.2 per cent, but from 1880 to 1890 it was 79.6 per cent. The gain in total population during the same two decades was 30.1 per cent and 24.9 per cent respectively.

Thus the school expenditure did not increase as fast as the population did from 1870 to 1880, but outran the population at an extraordinary rate in the decade from 1880 to 1890.

This is further shown by considering the expenditure per capita of population at the three epochs, as given in Table 11, columns 5, 6, and 7; in 1870 the per capita expenditure was \$1.64; in 1880 it was \$1.56, while in 1890 it had risen to \$2.24.

Such largely increased liberality, or, it may be said, such growing profusion, in the expenditure of public funds on the common schools

indicates a fixed determination on the part of the people to render these schools as good as money can make them. The result may be seen in the increased architectural beauty of the school buildings of to-day as compared with the structures, plain almost to repulsiveness, which existed as a rule a generation ago; in the greatly improved arrangements for heating and ventilation, and the better and more abundant apparatus, libraries, and material adjuncts generally; and above all in the higher grade in the teaching and supervising force.

All these effects have been produced through a larger liberality in expenditure; not the least of the benefits accruing therefrom has been to render the public schools more formidable competitors of the private schools and to stimulate the latter to rival the former. The large majority of the parents of the land will aim to send their children to the best schools, and the private schools, in order to retain their patronage, will have to elevate themselves to the plane of the public schools in the particulars above mentioned as well as in the standard of their course of study and in their general efficiency.

The amount paid for salaries of teachers and superintendents has increased 63.9 per cent in the past ten years; during the same period the number of teachers has increased only 27 per cent, about the same as the population. Each individual teacher, therefore, receives on an average a larger amount per annum than ten years ago. As a matter of fact, the average amount received by each teacher was \$195 in 1880 and \$252 in 1890.

The expenditure for new schoolhouses and permanent improvements has undergone an extraordinary expansion during the past year in the North Atlantic States; the nine States composing this group expended for new buildings and appliances \$10,860,263, being an increase of \$2,311,472, or 27.04 per cent over the preceding year. (Table 12, column 4.) At that annual rate this expenditure, large already, would more than *double itself in three years*. Taking individual States, New Hampshire increased her expenditure for school houses and apparatus 81 per cent, or nearly doubled it; Massachusetts, 70.47 per cent; New York, 20.17 per cent; and Pennsylvania, 33.32 per cent. The increase alone the past year, in each of the three last-mentioned States, is equal to more than half the whole permanent expenditure in either the South Atlantic or South Central Division.

In the South Atlantic States there has been a falling off of 17.04 per cent, or more than one-sixth, in the permanent expenditure. This movement will probably be reversed the ensuing year.

Of the total \$140,277,484 expended for common schools, \$26,291,796, or 18.7 per cent, were expended for permanent improvements; \$91,683,338, or 65.4 per cent, for salaries; and \$22,302,350 or 15.9 per cent, for other current purposes.

The total expenditure averaged \$2.24 for each person of the population and \$17.22 for each pupil attending school.

California and Colorado each expend for schools more than \$4 per capita of population. Next come the District of Columbia and Massachusetts, with \$3.93 and \$3.70 respectively. Seven States of the North Central Division, and Arizona and Nevada in the Western Division also have over \$3.

California expended more than any other State for tuition, viz, \$3.03 per capita of population, and Colorado, more for schoolhouses, \$1.47 per capita. Colorado expended more per capita for schoolhouses alone than did twelve of the States for all purposes:

The amount expended *per pupil* ranged from \$43.43 in Colorado to \$3.38 in South Carolina.

A TWENTY YEARS' RETROSPECT, 1870 TO 1890.

The following tables and diagrams exhibit the progress of the common schools of the United States since 1870.

Year.	Population.	Total number of pupils.	Average daily attendance.	Number of school houses.	Value of school property.
1870	38,558,371	6,871,522	4,077,347	116,312	\$130,383,008
1871	39,500,500	7,561,582	4,545,317	132,119	143,818,703
1872	40,477,000	7,815,306	4,658,844	140,167	159,406,374
1873	41,490,442	8,003,614	4,745,459	145,863	173,077,552
1874	42,570,731	8,444,251	5,050,840	150,534	183,101,193
1875	43,700,554	8,785,678	5,248,114	157,364	192,013,666
1876	44,881,700	8,869,115	5,291,376	159,533	201,592,171
1877	46,112,700	8,965,006	5,426,595	163,694	198,554,584
1878	47,397,151	9,438,883	5,783,065	169,493	203,258,664
1879	48,744,790	9,504,458	5,876,077	171,613	205,913,196
1880	50,155,783	9,867,505	6,144,143	178,222	209,571,718
1881	51,274,900	10,000,896	6,145,932	183,452	217,565,356
1882	52,441,700	10,211,578	6,331,242	185,884	223,424,448
1883	53,654,100	10,651,828	6,652,392	193,147	237,140,889
1884	54,919,358	10,982,364	7,055,696	199,479	245,457,741
1885	56,221,868	11,398,024	7,297,529	205,315	263,668,536
1886	57,447,100	11,664,460	7,526,351	208,777	275,809,020
1887	58,712,678	11,884,944	7,681,806	213,737	290,384,522
1888	59,935,709	12,182,600	7,906,986	216,399	301,425,928
1889	61,148,714	12,392,260	8,005,969	221,284	321,561,176
1890*	62,622,250	12,697,196	8,144,938	224,839	342,876,494

Years.	Number of teachers.			Paid for salaries of superintendents and teachers.	Total expenditure.
	Male.	Female.	Total.		
1870	77,529	122,986	200,515	\$37,832,566	\$63,396,666
1871	90,293	129,932	220,225	42,580,853	69,107,612
1872	94,992	134,929	229,921	46,035,681	74,234,476
1873	97,790	139,723	237,513	47,932,050	76,238,464
1874	103,465	144,982	248,447	50,785,656	80,054,286
1875	108,791	149,074	257,865	54,722,250	83,504,007
1876	109,780	149,838	259,618	55,358,166	88,082,578
1877	114,312	152,738	267,050	54,973,776	79,439,826
1878	119,404	157,743	277,147	56,155,133	79,083,260
1879	121,490	158,840	280,330	54,639,731	76,192,375
1880	122,795	163,798	286,593	55,942,972	78,094,687
1881	122,511	171,349	293,860	58,012,463	83,642,964
1882	118,892	180,187	299,079	60,594,933	88,990,466
1883	116,888	188,001	304,889	64,798,859	96,750,003
1884	118,905	195,110	314,015	68,384,275	103,212,837
1885	121,762	204,156	325,916	72,878,993	110,828,375
1886	123,792	207,601	331,393	76,270,434	113,322,545
1887	127,093	212,367	339,460	78,639,964	115,783,890
1888	126,240	220,894	347,134	83,022,562	124,244,911
1889	124,467	232,110	356,577	87,568,306	132,539,783
1890*	125,602	238,333	363,935	91,689,338	140,277,484

* The figures for 1890 are subject to a slight future correction, except population.

Percentage of the population enrolled in the common schools.

Year.	The United States.	North Atlantic Division.	South Atlantic Division.	South Central Division.	North Central Division.	Western Division.
1870.....	17.8	22.1	6.3	7.5	24.4	13.8
1871.....	19.1	22.0	10.0	11.6	24.8	14.0
1872.....	19.3	21.7	10.6	12.8	24.7	13.9
1873.....	19.3	21.4	11.8	13.0	24.3	14.6
1874.....	19.8	21.6	13.8	13.7	24.5	15.5
1875.....	20.1	21.7	14.6	14.2	24.5	16.4
1876.....	19.8	21.6	15.2	12.5	24.2	16.8
1877.....	19.4	21.0	15.3	12.0	23.6	16.7
1878.....	19.9	20.9	15.8	14.5	23.9	16.7
1879.....	19.5	20.6	15.1	14.8	23.2	16.5
1880.....	19.7	20.2	16.4	15.4	23.2	16.3
1881.....	19.5	19.8	16.7	15.7	22.7	16.2
1882.....	19.5	19.8	16.9	15.7	22.5	11.5
1883.....	19.8	19.6	17.8	17.0	22.6	16.7
1884.....	20.0	19.2	18.6	18.1	22.5	16.9
1885.....	20.3	19.2	19.0	19.2	22.6	17.0
1886.....	20.3	18.9	19.2	19.4	22.7	16.8
1887.....	20.2	18.7	19.8	19.3	22.5	16.8
1888.....	20.3	18.4	19.8	20.2	22.5	16.9
1889.....	20.3	18.1	19.8	20.2	22.6	17.1
1890.....	20.3	17.9	19.7	21.0	22.4	17.0

LENGTH OF SCHOOL TERM.

Average number of days the common schools were actually kept.

Year.	The United States.	North Atlantic Division.	South Atlantic Division.	South Central Division.	North Central Division.	Western Division.
	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>
1870.....	132.2	148.9	109.2	82.5	129.9	119.9
1871.....	132.1	152.0	97.4	91.6	133.9	119.2
1872.....	133.4	151.9	103.4	97.7	136.1	121.8
1873.....	129.1	154.6	97.4	89.1	129.6	118.3
1874.....	128.8	154.8	95.6	81.1	132.6	119.0
1875.....	130.4	158.7	95.2	81.0	134.6	132.5
1876.....	133.1	158.0	95.6	82.5	139.1	130.3
1877.....	132.1	157.2	91.4	80.3	139.8	130.1
1878.....	132.0	157.6	89.7	86.7	140.1	129.9
1879.....	130.2	160.1	88.6	81.9	136.4	132.0
1880.....	130.3	159.2	92.4	79.2	139.8	129.2
1881.....	130.1	158.7	92.4	82.1	138.8	133.8
1882.....	131.2	160.6	95.9	82.5	137.1	136.2
1883.....	129.8	161.0	95.9	82.5	137.1	132.6
1884.....	129.1	156.0	95.6	85.9	138.6	133.8
1885.....	130.7	163.1	93.4	87.5	139.1	131.8
1886.....	130.4	161.6	93.4	86.9	140.4	130.8
1887.....	131.3	165.9	95.3	87.5	139.5	131.6
1888.....	132.3	164.4	95.7	87.6	144.0	130.7
1889.....	133.7	164.1	95.0	88.9	147.5	135.7
1890.....	134.3	166.6	97.2	88.1	147.9	135.1

The total school expenditure compared with the total population and with the average attendance.

Year.	Expended for common schools per capita of the population.						Expended for common schools per pupil.					
	The United States.	North Atlantic Division.	South Atlantic Division.	South Central Division.	North Central Division.	Western Division.	The United States.	North Atlantic Division.	South Atlantic Division.	South Central Division.	North Central Division.	Western Division.
1870.....	\$1.64	\$2.31	\$0.47	\$0.48	\$2.09	\$2.02	\$15.55	\$17.82	\$12.68	\$9.44	\$14.68	\$22.25
1871.....	1.75	2.38	.63	.73	2.14	2.15	15.20	18.31	10.27	9.06	14.87	21.86
1872.....	1.83	2.40	.68	.81	2.31	2.27	15.93	18.87	10.47	9.08	16.37	23.57
1873.....	1.84	2.44	.68	.74	2.31	2.42	16.07	19.90	9.25	8.39	16.53	25.04
1874.....	1.88	2.51	.76	.68	2.38	2.40	15.85	19.90	9.00	7.55	16.57	24.37
1875.....	1.91	2.55	.80	.73	2.36	2.76	15.91	20.17	8.98	7.51	16.69	26.85
1876.....	1.85	2.45	.79	.55	2.37	2.78	15.70	19.15	8.65	6.70	16.91	26.35
1877.....	1.72	2.29	.72	.51	2.21	2.61	14.64	17.89	7.68	6.25	15.93	24.69
1878.....	1.67	2.15	.70	.56	2.14	2.73	13.68	16.55	7.21	5.98	15.08	25.82
1879.....	1.56	2.03	.63	.55	2.00	2.53	12.97	16.05	6.76	5.65	14.23	23.39
1880.....	1.56	1.97	.68	.55	2.03	2.41	12.71	15.64	6.60	5.40	14.40	22.59
1881.....	1.63	2.08	.72	.58	2.09	2.54	13.61	17.14	7.22	5.71	15.19	23.81
1882.....	1.70	2.11	.78	.64	2.19	2.59	14.05	17.35	7.63	6.25	15.80	24.32
1883.....	1.80	2.22	.82	.68	2.34	2.74	14.54	18.17	7.46	6.17	16.69	25.39
1884.....	1.88	2.25	.84	.74	2.48	2.83	14.63	18.37	7.44	6.26	16.90	24.68
1885.....	1.96	2.38	.88	.82	2.53	2.90	15.12	19.19	7.32	6.74	17.54	26.31
1886.....	1.97	2.36	.88	.87	2.54	2.88	15.06	19.11	7.33	6.93	17.45	25.52
1887.....	1.97	2.35	.90	.87	2.55	2.76	15.07	19.38	7.33	6.88	17.45	24.85
1888.....	2.07	2.48	.95	.87	2.68	2.96	15.58	20.60	7.61	6.60	18.29	27.38
1889.....	2.17	2.59	.98	.94	2.76	3.28	16.51	21.64	7.77	7.12	19.30	29.37
1890.....	2.24	2.76	.96	.98	2.81	3.35	17.22	23.58	7.63	7.34	19.70	30.45

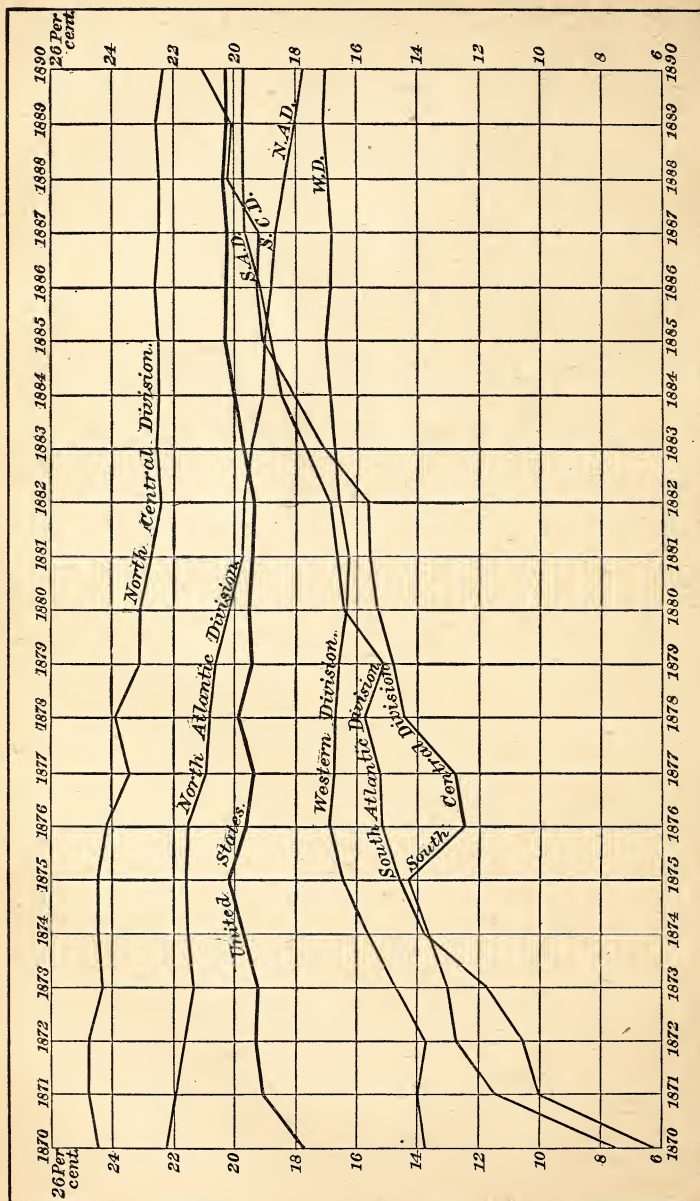


Diagram showing the percentage of population enrolled in the common schools, as tabulated on page 36.

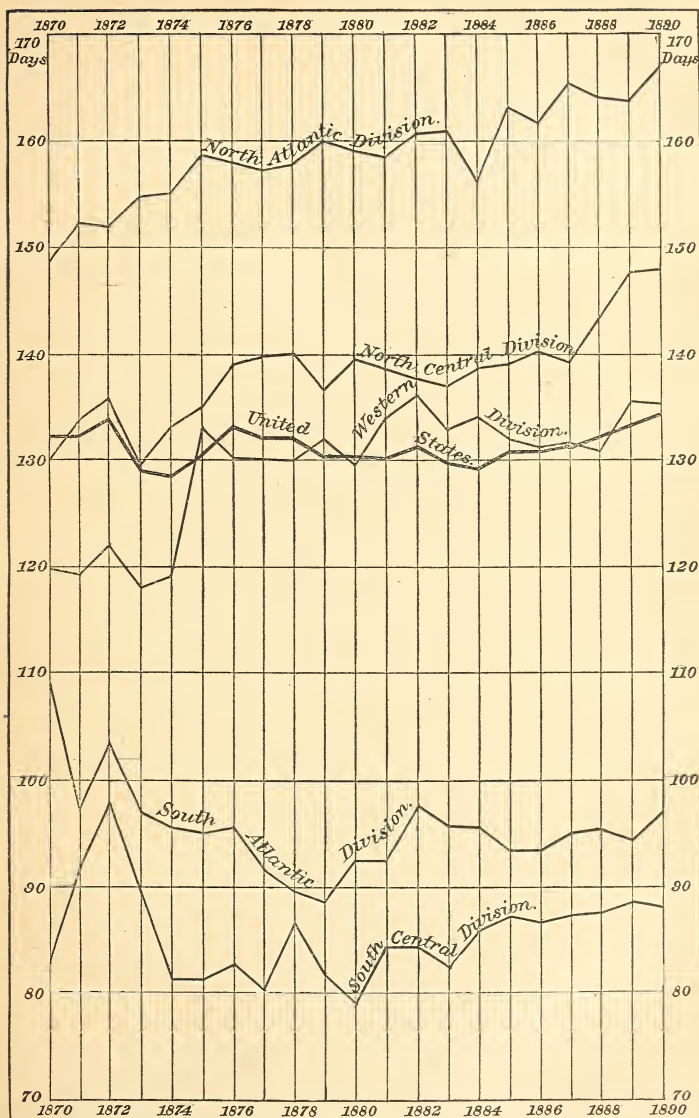


Diagram showing the average number of days the common schools have been kept, as tabulated on page 36.

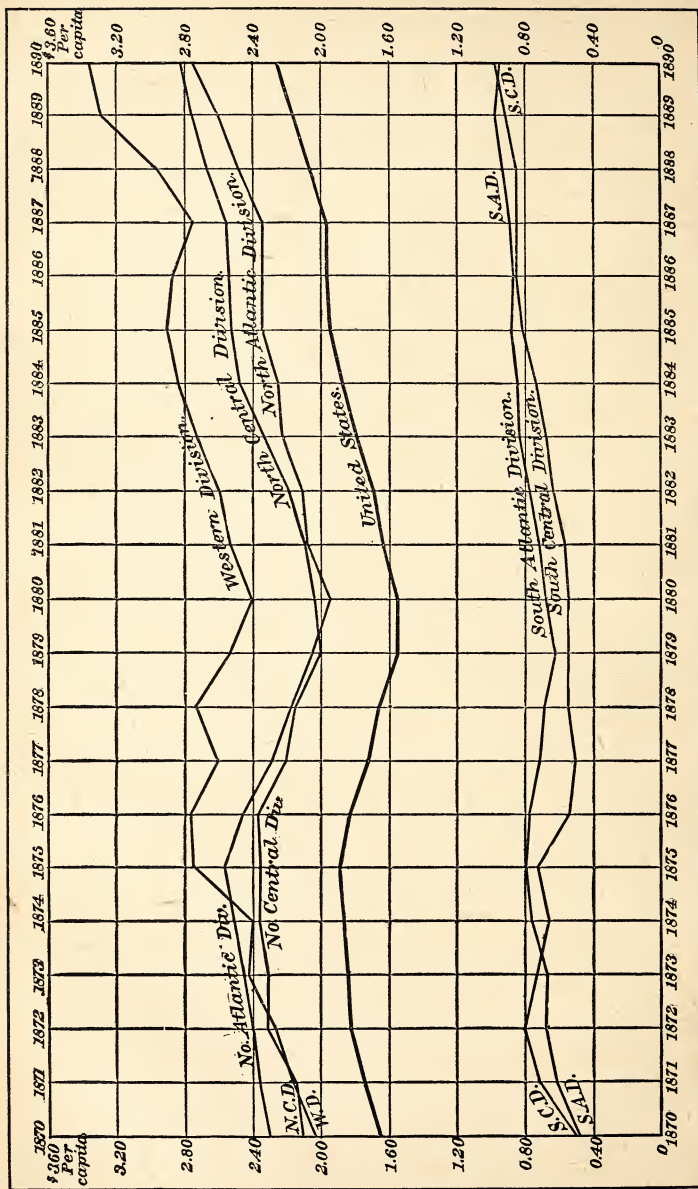


Diagram showing the total amount expended for common schools per capita of population, being a graphic representation of the first part of Table on page 37.

CHAPTER II.

REPORT ON THE EDUCATIONAL CONGRESSES AND EXHIBITION HELD IN PARIS IN 1889.

By W. H. Widgery,

Assistant Master at University College School, London.

LETTER OF TRANSMITTAL.

To the COMMISSIONER OF EDUCATION, U. S.:

SIR: I have the honor to lay before you a report on educational matters at the Paris Exhibition in 1889. The range of the questions discussed, the wealth and variety of the objects exhibited, make a full account almost impossible. I have striven to give the salient points, with such references to the copious and valuable literature, published mainly by the Government, as may enable a student interested in any special point to pursue his inquiries further.

The spectacle of a nation raising itself triumphantly from unexampled disaster can not fail to arouse and enlist the sympathies of every man. Education has been universally looked on as the great regenerator; during the last decade a system of education, more coherent and close knit than any other in the world, has been loyally accepted by the country from the hands of a small body of pedagogic reformers.

The solutions of difficult educational problems made by a highly centralized government, regarding as its supreme aim the full and free development of all the forces, physical, intellectual, and moral, of its citizens, must needs be of interest and importance to men of English race, who are jealous of state interference and look on the private initiative of the individual as the main cause of their greatness. At a universal exhibition the nations meet together for mutual improvement. France may justly complain of neglect from many quarters, but her own work, due to an intense logical sense coupled with the intellectual courage to put into action whatever the mind sees to be right, only stands out the clearer; to other nations wedded to the anomalies caused by an exclusive attention to historic precedent, she has given a necessary corrective and the means of understanding her own point of view. Among nations, as among men, when once the way to a thorough understanding has been opened up, action is not far off, and this the Paris Centenary, as far at least as education is concerned, may fairly claim to have evoked.

I have the honor to be, sir, yours obediently,

W. H. WIDGERY.

3 GRAY'S INN SQUARE, W. C., LONDON, *January 1, 1890.*

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A.—THE CONGRESS ON PRIMARY AND SECONDARY EDUCATION.

SECTION I.—INTRODUCTORY.

After the disasters of 1806, Prussia, crushed and dismembered, without hope of foreign aid, was forced to seek within herself the sources of her own revival. "We have lost our lands," cries Friedrich Wilhelm III; "abroad our power and our glory have fallen; but it is our duty and our desire to strive to regain power and glory at home. My chief wish is that the greatest attention be paid to the education of the people."

The control of the school began to pass from the church to the State; teaching was raised to a profession and made secular, entrance being regulated by a special examination. Aided by Schleiermacher and Süsser, W. von Humboldt, with an energy that profound belief alone can call forth, embodied in the education of Prussia Wolf's conception of the teacher as the high priest of ancient culture.

Among the considerations urged in support of the draft that afterwards became the important edict of July 12, 1810, we find these eloquent words of Humboldt: "Education as a whole is honored in the State, when every man engaged in it is bound to show his capacity beforehand. Those who devote themselves to teaching, and who form, as it were, with the approval of the public, a closed circle, develop in time a feeling which, while free from any narrow corporate spirit, presses forward firmly and surely to a common goal. A pedagogic school and a pedagogic fraternity will arise; if it is important to be on our guard against a unity of opinion obtained by compulsion, it is none the less important by means of a certain community of interests, incapable of conception unless elements that do not rightly belong to it are excluded, to arouse a force and enthusiasm, lacking to individual and scattered activity; and this community of interests can reject the bad, raise and direct the mediocre, and lend wings and strength to the progress even of the best."

With her physical forces developed by the turbulent genius of Jahn, Germany found her justification in the "*année terrible*," the fiery baptismal year of a new France.

Scattered throughout the exhibition were many speaking statistical diagrams; for three years after the war the lines fall and then steadily rise, often, as in the case of education, almost perpendicular, testifying to a marvelous fecundity and recuperative power. The reader whose ideas of the French Revolution are derived from the moving accidents of

a popular history will find his views profoundly modified when he studies the whole work of the convention in educational matters. Directly France has a republican form of government, education comes to the fore; with a monarchy it is hedged aside or malignantly crippled by cunningly devised regulations; but even when the times are out of joint men like Guizot and Duruy can realize some of the hopes of the revolution.

Like Germany, France has turned her most serious attention to education. She has followed the same development and carried it much further; indeed, she seems to have crowded into the last ten years the work of a century. Instead of watching the slow patchwork mending of ancient institutions, we see orders, decrees, and laws, touching some of them the very foundations of society, pass before us in swift succession like the rapidly moving scenes of some great drama.

Through the law of June 1, 1878, 500,000,000 francs were spent on school buildings; in 1878 the *Musée pédagogique* was founded; on August 9, 1879, every department was ordered to provide a training college for men and for women.

By the law of December 11, 1880, apprenticeship schools were made an integral part of primary education. On June 16, 1881, school fees were abolished and teachers compelled to obtain a pedagogic certificate. On March 28, 1882, education was made unsectarian, the clergy being deprived of their right of inspection, and attendance at school became compulsory. On March 20, 1883, all the communes and villages were ordered to provide suitable school buildings. On October 30, 1886, the organization of education was carefully settled, while on July 19, 1889, the keystone of the whole system was fixed when the salaries of the teachers were regulated.* The activity of the law, however, was not confined to primary education. On February 7, 1880, a law due to Jules Ferry constituted the high council of public education, a consultative body at the right hand of the minister; the members are nominated by the President or elected by their peers; the humblest teacher in the land has his representative in this pedagogic parliament. On December 20 of the same year the famous law of Camille Sée made the proper education of girls a matter for the state. By a decree of December 28, 1885, the isolated faculties were brought into harmonious working order under a high council of the faculties.

To what fundamental idea are we to ascribe this phenomenal activity of the state in educational matters?

If we follow M. Marion in his striking monograph on the "Movement of Pedagogic Ideas in France," we shall say that "the idea of the rights and duties of the state in matters of education has triumphed brilliantly. The idea of Condorcet and Lakanal, forgotten under the Empire, disgraced under the restoration, taken up with authority by Guizot, and partly realized in the law of 1833; the idea whose accom-

* La nouvelle législation et commentaire suivis du texte des lois, décrets, circulaires et programmes, par M. P. Carrive, juge au tribunal d'Étampes. (Hachette.)

plishment lay in Carnot's project of 1848; the idea stifled in 1850 by the deadliest of reactions; valiantly resuscitated by M. Duruy, but in vain; lovingly elaborated by M. Jules Simon and always condemned to wait, until the final advent of the republic compelled every one to see clearly that to make primary education compulsory was the necessary guaranty of social order and the recovery of the country."

The three cardinal points of the reform in France are that primary education should be compulsory, free, and secular. The historical development, however, did not exactly follow the logical. If the state demands the first, it must grant the other two. We can not say to a man "Take this or we'll punish you," and then claim payment for the gift; we must in addition make the gift good, and therefore carefully train the teacher. Since it is impossible in every district to make a separate school for each separate religious body, the teaching in the compulsory school must be secular. This does not exclude morality, which is as necessary to the state as salt is to the sea. Religion, the private concern of each individual, belongs to the clergy and the family.

Not only has M. Ferry shown the antithesis "either confessional religion or atheism" to be false, but he has restored to the teacher the fairest portion of his task.

What answer has the country made to this puissant impulsion from above? What will be the outcome of this energy and passion that we feel moving and surging under the formal covering of law? The answer lies in the future, but the spring is so full of vigorous shoots that we may fairly make a hopeful forecast for the autumn.

We need not hesitate for lack of material. The Government seems only too eager to supply the means for following and criticising its acts. The six volumes of the *Recueil des monographies pédagogiques publiées à l'occasion de l'exposition universelle de 1889* form the testament of the belief of the Government in education. The sixty monographs cover a wide range of history, administration, and method. That part of education which can be embodied in visible form, was shown in bewildering wealth at the exhibition. The progress of pedagogic science, forever making and never made, was provided for by two congresses, one covering primary education and the other secondary and higher education. Indeed, it rained congresses: Physical exercise in education, technical education for commerce and industry, bibliography of mathematical sciences, chemistry, physiological psychology, geography, etc.

We shall endeavor to supplement an account of the two congresses and the exhibition specially affecting education, with such other matters as may be of interest to teachers. In the hope of keeping the account clear, the order of time in which the various educational questions were discussed has been neglected.

SECTION II.—THE SORBONNE.

The culminating point of the fruitful coöperation of state and city is to be found in the palatial edifice of the new Sorbonne, solemnly inaugurated by the President of the Republic on August 5. The impressive ceremony will remain vivid in the memories of all who were fortunate enough to be present.

Robert de Sorbon, born in the first year of the thirteenth century, the son of "a father and mother of low condition," obtained from Louis IX in 1250 or 1256 the gift of a house in which to lodge his *pauvres escoliers* while they received a free education from various groups of "secular ecclesiastics."

The great reconstruction by Richelieu has been surpassed in grandeur by the new buildings, of which the foundation stone was laid only four years ago. When completed the Sorbonne will cover about $6\frac{1}{2}$ acres. It will be the home of the Academy of Paris, the faculty of letters and the faculty of sciences.

The story of the many delays and sacrifices necessary to carry on the great work may be found in the last volume of M. Gréard's *Éducation et instruction*.

The enormous amphitheater, capable of seating 3,000 persons, was filled to overflowing by the élite of France, the strangers who had come to take part in the congresses on education, the French students and their guests.

This human hemicycle of young life fringed the dense mass in the center of men who had made their mark in life. The youth of the world was there and it seemed as if the university of the thirteenth century had come back to witness its second birth. The nations were there linked in a common bond as students and seekers after truth. What living breath had changed an administrative machine, set and kept in motion by the omnipotence of the state, but destined only to imprint an official hall-mark on intellectual goods, into a living personality? The place of the impalpable University of France will be taken by local flesh and blood at Paris, at Lyons, at Bordeaux; the virtues that spring out of corporate life will be found again. As science is common to the whole world this corporate life among students from all countries will tend to rise higher and higher towards the clear uplands of truth.

The president on his arrival was received by M. Armand Fallières, the minister of public education and the fine arts, M. Gréard, the vice-rector of the Academy of Paris, and M. Liard, the director of higher education.

The whole assembly stood while the band played the Marseillaise. At the wish of the students it was given a second time and they sang it while the foreign banners were waved to salute the French.

The keynote of the opening address of M. Gréard* was the praise of the University of Paris, *Parisius sine pari*. Students came from all parts of Europe because there "the love of truth was the sole rule known." The love of truth, what higher aim can any teaching body put before itself? Since Spinoza claimed the *libertas philosophandi* is any other possible? If we permit any barrier whatever to free investigation, we acquiesce in closing up one of the avenues to truth.

As though to remind the auditory that the Sorbonne was destined for the severe study of science M. Gréard's discourse was followed by a learned account, from M. Hermite, of the works of the various mathematical professors at the Sorbonne since 1808.

Next came M. Chautemps, the president of the Paris municipal council, who, in the course of his speech, said: "To affirm the interest taken in the cause of higher education by the representatives of the people of Paris would be superfluous; for that purpose the sacrifices agreed to for the reconstruction of the Sorbonne are eloquent; they bear witness that in our eyes the power and prosperity of a country are intimately bound up with the life it makes possible for its scholars, its writers, its artists, and that the money devoted to the development of higher studies is transmuted not only into industrial progress, but also into an elevation of the moral and intellectual standard of the whole nation, multiplying a hundred fold the value of each individual and giving a nation the superiority over its rivals."

He was followed by M. Fallières, who saw in the devotion of the republic to education its surest claim to the gratitude of posterity. The French democracy, scarcely free and mistress of itself, recognized with a sure instinct a great regenerative force in science. Eager as it ought to be for the education of the people, it saw that primary instruction was but a canal to distribute the waters that come from a higher source, and that the higher the source was the further and deeper would the waters spread and penetrate.

After touching on the history of the universities since the revolution and noting the lack of coherence among the different faculties, the speaker made an eloquent appeal to the young students to put an end to quarrels and divisions and in a higher region of thought and action to find common ground in a common love for truth and country.

After the ceremony the students, grouped in nations, defiled before the president at the entrance of the Sorbonne.†

* Speaking of M. Gréard, it may be noted here that among his many services perhaps the importation of literary style into works on pedagogy may be the most far-reaching in its consequences; when the science of education is made readable, the outer world will be won.

† For the full text of the speeches of MM. Gréard, Chautemps, and Fallières see the Bulletin administratif du ministère de l'instruction publique, August 10, 1889.

SECTION III.—THE CONGRESS OF PRIMARY INSTRUCTION.

Next day M. Gréard opened the Congress on Secondary and Higher Education and a few days later the one on Primary Education.

The success and smoothness of both must be largely attributed to the admirable way in which the preliminaries had been arranged and the ground cleared.

An order of December 11, 1888, nominated the commission for primary education. M. Gréard was chosen president, MM. Buisson and Ollendorff the vice-presidents, and M. Lenient, assisted by M. Defodon, the secretaries. The three questions chosen for discussion were—

(1) In what form and to what extent can professional instruction (agricultural, industrial, commercial) be given in elementary and higher primary schools and in training colleges?

(2) What share of primary education ought to be intrusted to women as teachers, head mistresses, and inspectresses?

(3) The functions and organization of practicing schools attached to training colleges and similar institutions.

In answer to these questions memoirs were sent in to the committee of organization from all parts of the world. Happily they were written by teachers and professors in actual practice and displayed that peculiar innerness which can be shown only in those subjects to which a man devotes his life. No science has suffered more than pedagogy from the amateur, who seems to think that interest, unsupported either by deep study or practical experience, is a sufficient excuse for publishing his half-digested ideas.

With great skill the committee had analyzed these memoirs into a series of definitions and propositions, those on the question of practicing schools being the most numerous. Fuller details may be found in fascicule 91 of the publications of the *Musée pédagogique*, entitled *Congrès international de l'enseignement primaire, Analyse des mémoires*.

Probably no country has ever had so representative a congress; indeed, it would be more correct to call it a pedagogic parliament. Six hundred primary teachers were elected by their colleagues, not counting the delegates of the heads of the higher primary schools and training colleges. Each canton sent up one member to form a second elective body for the department, the member for the latter being determined by the total number of teachers in actual work.

A curious feature of the Paris press was the complete absence in the daily papers of any report or account of the debates in the congress.

On Sunday evening, August 11, at 9, M. Fallières gave a "lunch d'honneur" to the delegates. Next Monday at 10 the members to the number of sixteen hundred assembled in the great amphitheater of the Sorbonne. The minister then made the following speech:

LADIES AND GENTLEMEN: I was unwilling to leave to another the honor of receiving you. You have answered our invitation. Welcome to Paris, brilliant with the fêtes in honor of the French Revolution and the splendors of the universal exhibi-

tion; to Paris, where you will hear every language, where you will see every kind of dress, where the marvels of art, of industry, of science from all countries of the world will challenge your attention and your admiration. Welcome to the Sorbonne, where a few days ago under the presidency of the head of the state an unforgettable ceremony inaugurated the new era of higher education.

Your congress succeeds others that have surpassed our expectations, not only by the members who have taken part in them, but also by the value of their labors, the brilliancy of their discussions, the wealth of information given, the importance of the decisions arrived at, and the direction given to public opinion. Your congress in its turn will certainly be neither less brilliant nor less fruitful. I congratulate the committee of organization on the guaranties for success which your congress shows. We recognize the hand of the eminent man who was called some years ago in this very place "the first teacher in France."

There have been many pedagogic reunions, but yours differs in several points from the preceding. At the conferences of 1878 you listened but did not speak. There were others afterwards at which the members spoke, discussed, and voted. But one of them was comprised entirely of inspectors and the heads of training colleges. In the other only primary teachers took part. Moreover, all of them were exclusively French.

Then came the congress at Havre; the doors were opened to representatives of foreign education. But there was no rule to settle either the number or the selection of the members. More than once during the labors of the congress the inequality of the representation was cause for regret. The experience of the past has not been without profit for you, and the better arrangements will be of considerable advantage to all. In this meeting all kinds and degrees of primary education, public or private, teaching or administrative, elementary and higher primary schools, from the village school to Fontenay and St. Cloud are represented.

The number of delegates has been exactly proportioned to the number of schools represented. For the second time we are happy to see among us accredited representatives of pedagogy abroad. They have come from different parts of the world, and their presence here is an honor to us, and I have the delight of addressing to them the brotherly greeting of France.

Under such conditions, who can doubt of the success of our congress?

The very nature of the questions to be discussed is calculated to enhance the brilliancy of their discussion.

At first sight it seems as if we were in presence of three technical questions somewhat narrow and dry. But you are under no delusion, you know what they contain; you soon saw that they were among the most delicate, the most living, so to speak, of the problems of popular education.

As to technical education—you are going to debate the question that stands on the order of the day in all countries: *To what ought primary education to lead?* How can we help it to form not half-scholars or semi-bachelors, but useful workers for the country, men well armed for the battle of life? By what means can the school turn out first-class workmen, intelligent and well-instructed agriculturists, tradesmen trained and prudent? What form, in short, ought we to give to primary education to make it fruitful, practical, useful both to the individual and to the community? Questions enough to strongly excite men's minds. They could not be treated by an assembly more competent than this.

In the second place you will have to discuss the rôle of women in teaching and administration; a still more delicate and attractive question, as the solutions already arrived at differ in the various countries. The debate can not lack interest. The United States, for example, throw open the whole of education, even that of boys and young people, at least in certain of the towns, to women; whereas in the countries of central and northern Europe everything is confined to men, even the education of girls. Finally, under the name of practising schools you have to deal

with the important question of a proper training of the teaching body. Neither the French nor foreigners can be indifferent to the examination of this question. Elsewhere as among us is not the prime difficulty to form teachers, whose common sense and professional qualities recommend them as much as their theoretical knowledge attested by a certificate? With such a programme you run no risk of your sittings lacking animation or interest. Besides, a valuable book has been distributed among you, containing a large number of articles, with exact and definite conclusions. These can not fail to furnish you with many useful items of information.

It is time to let you proceed to your constitution in sections. One word as to the function of the administration with regard to the congress. The administration is among you, taking part in your debates, answering your questions, interested in your communications. But it desires the work of the congress to be yours. It knows your capacity, your competency. Deliberate, gentlemen, the honor and responsibility of your resolutions are undividedly yours.

I declare the Congress of Primary Education to be open.

After this speech the minister invited the leading delegates to join him on the platform. Mr. Clarke and Miss Smith were chosen for the United States. The other countries represented were England, Belgium, Holland, Switzerland, Baden, Saxony, Austria, Spain, Italy, Sweden, Russia, Egypt, Mexico, Brazil, and the Argentine Republic.

On the invitation of M. Gréard, the president, the members at once went to the various rooms designated for the three sections and proceeded to elect their bureaux.

The presidents elected were M. Salicis, since deceased, general inspector of handicraft; * M. Carriot, director of primary education of the Seine; M. Chappuis, rector of the Academy of Dijon.

There were ten sectional meetings and four general assemblies.

In what form and to what extent can technical instruction (agricultural, industrial, commercial) be given in elementary and higher primary schools, and in training colleges?

The report† was read on August 16 by M. Martel, an academy inspector and delegate for the general inspection of professional schools. The main points were the following:

Although in the preliminary analysis of memoirs a special attempt to define "professional teaching" had been made, the section found it impossible to come to any agreement. The word "professional" was provisionally suppressed and the discussion limited to the three heads: (1) the teaching of agriculture, (2) commercial teaching, and (3) industrial teaching, each of these being considered in relation to elementary primary school, the higher elementary school, and the training college.

* I venture to use this word to connote manual work from a strictly pedagogic point of view; *slöjd* is too ugly.

† A full account of the debates in the sections may be found in fascicule 95: *Congrès international de l'enseignement primaire. Compte-rendu des séances.*

THE TEACHING OF AGRICULTURE.

This branch of our subject did not occupy us for long. In primary education it was evidently impossible to make agriculturists in the true sense of the word, besides it is better to teach at school what can not be learned elsewhere afterwards; to children from 6 to 13 it is necessary, through a scientific school method, to give a taste for things agricultural, to accustom them to a habit of observation and to make them capable of understanding what has been written for them in popular books. In the higher primary school, however, the teaching of agriculture, while preserving a scientific character, might be largely developed; a special course of agriculture would be in place there, theoretical explanations being complemented by practical work, either in a garden or a field for experiments; the use of implements ought not to be made of the first importance, as daily practice or instruction in a special school would easily bring skill later on; in fact it was desirable and necessary to found a knowledge of agricultural facts on a scientific basis. At the training college it was enough if the pupil teacher were made capable of giving later on, in a proper manner, either in an elementary or a higher school, such instruction as we have sketched out above.

The exchange of ideas due to the memoirs and the discussions resulted in the following resolutions, which were accepted by a large majority of the members present.

I. The teaching of agriculture in the primary school, often helped by lessons, exercises, and above all by the museum, the garden and school expeditions, should be based primarily on simple experiments, as to the growth of vegetables.

II. At the higher primary school, the special course of agriculture, and the demonstrations in the field for experiments, should be adapted to local and district needs.

III. At the training college the pupil teachers should be made competent to teach agriculture under the conditions enunciated in the two preceding paragraphs.

The general assembly accepted these three resolutions at once without any discussion.

COMMERCIAL TEACHING.

This question was the easiest our section had to deal with. Resolutions were voted within an hour, the time being taken up mainly with interesting accounts from the foreign delegates of the way in which commercial teaching has been organized abroad.

The section agreed unanimously that commercial teaching in the strict sense of the word was not adapted either for the elementary school or the training college. Children of 12 would not understand it and pupils of the training college had enough subjects already. It was, however, clear from the discussion that several members were of opinion that,

although the teacher might not find commercial teaching on his programme, he should not refrain from explaining to the children the commonest transactions, such as buying and selling, the consequences of signing a deed, the precautions desirable to take and the obligation to honestly fulfill all engagements entered into. These are matters of practical morality.

There was no desire to alter the curriculum of training colleges. Without introducing commercial teaching in the strict sense of the phrase, the present instruction in the simplest elements of common law, accounts, and bookkeeping will be carried on as before.

Although commercial teaching is not desirable in elementary primary schools and training colleges it may be given with advantage in the higher primary schools. A distinction, however, may be made between the two kinds of instruction. Calligraphy, geography, modern languages, the keeping of accounts, are of general use and profit to every man, whether he devotes himself to commerce or not, but the study of wares, of transport, ideas on law and commercial legislation, office work, are only of use to future tradesmen. We consider it, then, advisable to introduce the first group of subjects in the major part of our higher primary schools as a restricted commercial teaching, while the latter group might be reserved for the great cities that possess important houses of commerce. We offer, then, to the approval of the general assembly the following three motions:

I. Commercial teaching ought not to be introduced into the primary elementary school.

II. This teaching may be given with advantage to boys and girls in higher primary schools; it should be developed and made complete in large towns, restricted and simplified in other places.

III. At the training college it will be sufficient to give the pupil teachers elementary notions of common law, accounts, and bookkeeping.

The first resolution was accepted by the general assembly without discussion.

At this point the minister, M. Fallières, took his place on the platform and was heartily cheered.

After the vote had been taken M. Caraffa, the head of the commercial school at Cordova (Argentine Republic), desired to repeat the remarks which he had made in the sectional meeting. He thought the elementary school ought to give the first rudiments of all the subjects that would be developed later in the higher school.

Instead of excluding commercial teaching he should have preferred the formula, "commercial teaching ought to be given in every school and proportioned to the age of the pupil." The graduate of a training college, he thought, ought to be capable of giving instruction in any part of the primary school.

The president was of opinion that the programmes of the elementary school were elastic enough to include M. Caraffa's proposal in the sense given to it by the report of the section.

The other two resolutions were accepted.

INDUSTRIAL TEACHING.

Although we agreed, the report continued, very soon about commercial teaching, this was by no means the case with industrial teaching. A long and passionate discussion arose over this question. From the commencement, in the minds of a large and important group of the section, two questions that have undoubtedly an intimate connection, though it is easy to keep them apart, were confused together. On one side elementary handicraft, considered as a pedagogic method whose sole object is to give a child quickness of eye and sureness of hand, with the view of making concrete the teaching of design and of science, but without any thought of immediate application to a trade; on the other side, industrial teaching, which, of course presupposes handicraft and also manual work made more complete and carried further and above all specialized so as to form the introduction to the trade to which the child is going to devote himself; in a word, *professional* hand work. Of these two questions the first was submitted four years ago at the Havre congress, and settled by resolutions assuredly not yet forgotten. It hardly seemed best to submit the same proposal again after so short an interval. The second question was really the only one the section had to discuss.

Although the partisans of handicraft had already won their cause at Havre, they brought in the general question again, arousing, naturally, the old objections. Although this made our debates long and animated, there was compensation in the interesting communications given on results already obtained.

The discussion on the real point before us was short enough and resulted in this motion: *Technical industrial teaching is incompatible with the aims and programme of primary schools and training colleges.* This formula you will notice leaves a gap in our report, as it does not distinguish, as we have done in the case of agriculture and commerce, the share of the three grades of our schools in industrial teaching.

The proposer of the motion did include them at first, but suppressed them when it was pointed out that the section was hardly competent to vote as a truth of principle the suppression of industrial teaching in the higher primary schools. Quite recently a reproach had been made that the teaching was not practical enough and that it was necessary to transform the schools in the direction of technical instruction.

These were the conditions under which our resolution was taken. We offer you no solution on the question of industrial teaching in higher primary schools. In this plenary sitting, if you consider the question opportune and there is sufficient time, you may either settle

it by a vote or perhaps preferably put it aside for further study, carried out more at leisure and after mature reflection.

Immediately on the opening of the debate by the president, the proposal to add the word "elementary" came from several quarters and it seemed as if the protracted debates of the section would be continued. It was difficult to compare the procedure of other countries with that of France, as many do not possess a higher primary school. In Belgium industrial teaching was independent of primary education, and in France two separate administrations were concerned. At last a large number of members demanded the closure. This was voted and the resolution to add the word "elementary" was lost. The resolution of the section remained intact, viz:

I. Technical industrial teaching is incompatible with the aims and programme of primary schools and training colleges.

What share of primary education ought to be intrusted to women as teachers, head mistresses, and inspectresses?

The sectional discussions on the share of women in education had been heated and at times acrimonious. The ladies were considerably disturbed by meeting with an active opposition to their views. The difficulties arose over the employment of women in boys' schools and of men in girls' schools. A mixed staff does not seem to present such difficulties in other countries as in France. Apparently there is a decided objection to allow women to teach in a school unless they are relatives of the masters. In spite of strenuous opposition the proposal to limit women in mixed schools to the elementary classes was carried. As a makeweight it was affirmed that men teaching in a girls' school should be married. In spite of all the heat displayed the section got through its programme completely. As M. Gréard, quoting Montesquieu, subsequently said, "*il n'y a que la passion qui éclaire.*" A long report was read to the general assembly on August 14, by M. Delapierre, but the discussion ran over into the next day. The nine resolutions sent up by the section were afterwards reduced to seven. The first two were adopted unanimously, viz:

I. In every infants' class of more than 50 on the register the teacher ought to be assisted by a nursemaid.

II. The infants' class will be attached, according to local requirements, either to the maternal school or the primary school for girls.

In the third resolution M. van Meenen proposed to substitute "the lower classes" for "the classes of the elementary grade," remarking that at Brussels women taught in boys' schools up to the higher grade, which was reserved to men.

M. Pizzurno, the delegate of the Argentine Republic, remarked that excellent results had been obtained in his country through intrusting women with the first and second grades.

M. Foubert, a primary inspector, asked whether the "lower classes" include the middle school; if so, he should object to the amendment. The president remarked that it was for the administration to determine how far up the school women should be employed. The Congress had only to lay down principles.

M. van Meenen's amendment was carried, making the resolution run:

III. In boys' schools, the lower classes may be intrusted to women.

The next resolution was voted at once:

IV. In training colleges for women and in the higher primary schools for girls, certain subjects might be intrusted to men.

The fifth resolution of the section on the place of women in mixed schools gave rise to an animated debate and many amendments. Mme. Kergomard, general inspectress of maternal schools, made several observations on the resolutions of the second section taken as a whole. She spoke for the minority, which she claimed included the majority of the women present. She resented the imputation of physical weakness, the inability to make journeys or inquiries. Women were as capable as men of imbuing the youthful mind with republican ideas; indeed, the chief hindrance to their diffusion had been the want of their acceptance by all women; every village and hamlet needed a republican woman teacher. The law had just made women fellow-workers with men, and it was too late to retrograde.

M. Caïre, primary inspector at La Mure (Isère), wished the law of October 30, 1886, which allows a mixed school to be intrusted to men or women, to be maintained, with the proviso of restricting small country schools of less than thirty children to women alone. Although Mme. Kergomard's contention may be just politically, a woman could hardly act in the administrative capacity of secretary to the mayor. The section, perhaps wisely, from a pedagogic point of view, had shown itself more timid than the senate.

M. van Meenen considered women as physically strong enough for any school work, and thought the rôle of women should be increased in boys' schools; if a woman was capable of being the head of a training college, was she not capable of inspection? The secretaryship to the mayor and the large number of children in the class were special cases, which could be safely left to the local administrative powers.

Mr. Lyulph Stanley, a member of the London school board, thought the question of men or women teachers of secondary importance to the education of the children. If mixed schools were desirable, women must take a large share of the work in them; for his part he considered an education in common, good both for boys and girls. The experience of the London school board in permitting pupil teachers of both sexes to follow certain courses of study together had not been attended by the slightest inconvenience. The civil law in France was very hard on women, and the same sort of treatment was liable to be carried into the school; he considered the motion and its precautions unjust to women.

Several more speeches were made and several amendments proposed; at last the closure was voted, and the president asked the assembly to vote on the three different systems:

(1) The system of the second section, maintaining that in theory mixed schools should be intrusted to men, except in certain exceptional cases.

(2) The opposite system, which would intrust them to women only, and, finally, the third form, which was adopted as the resolution, viz:

V. Mixed schools may be intrusted to men or women, according to need.

The fifth and sixth motions of the section were put aside by the president, as they related to France only, and were not of international value. They had reference to the share of the sewing mistress in teaching the lower classes in other subjects and to freeing the head mistress of a school of not less than five classes from class work.

The discussion on the next motion, the share of women in inspection, proved as ardent as the previous discussions had been.

Mlle. Scordia, of Paris, supported the demand of the minority in the section, claiming a share for women in the work of inspection. This claim ought not to be taken as a hostile act directed by women against primary inspectors. Even admitting the objections made, they were not absolutely exclusive. Let at least a trial be made under favorable circumstances, and she hoped that inspection by a woman would be made welcome in girls' schools.

M. Gavard, the head of the department of public instruction at Geneva, said that the question had been settled in Switzerland. Inspection by women had been accepted by the family as well as the state; it was unwise to put a veto on the discretion of the administrative powers.

M. Delapierre thought the different conditions in other countries made a comparison with France delusive. If inspection of girls' schools were intrusted to women only, boys would receive an education republican and patriotic, but neutral as far as religious dogmas were concerned, while that of girls would be probably something quite different. To weaken the patriotic idea in a number of their schools would be a blunder.

M. Houzeau de Lahaie, member of the Chamber of Representatives of Belgium, desired to leave the higher offices of teaching open to women. In Belgium women had shown, under trying circumstances, the same devotion, moral force, and capacity as men. He hoped the assembly would not let it be possible for the adversaries of liberal ideas to affirm that liberal ideas had been condemned at Paris.

A proposal to apply the closure was rejected.

M. Plazy, primary inspector at Angoulême, approved the restriction of women to education and instruction; on the administrative side they would not be able to bear the brunt of party struggles to which the primary inspector was very liable.

The inspector brought to his task more energy, connectedness, and calmness. The cases really needing the aid of a woman were rare and might be left to the tact and moderation of the inspector.

Mlle. Hourtefeu, the head of the training college of Tarbes, spoke with reluctance, but as her defection had been specially mentioned she was compelled to justify herself. Women were not fit to act as inspectors; how could they lodge at any chance wayside inn, or suffer the other inconveniences of traveling in remote districts. The inspector was as capable of protecting a woman teacher as any other woman would be; besides the professional contact of men and women was of advantage to both.

The closure was again demanded and passed, after the president had read a long list of amendments; three propositions were before the assembly.

(1) The motion of the section to place the inspection of girls' schools entirely in the hands of men.

(2) The motion, chiefly supported by the foreign delegates, to intrust inspection to men and women.

(3) The motion to employ women, by way of trial, for inspection in favorable places. The second was rejected and the third adopted under the form of—

VI. By way of trial, employment may be made of women in the work of inspection.

The last resolution was accepted in the form—

VII. It is desirable to maintain the ordinary and the general inspection of maternal schools by women.

The contrast between the more liberal views of the French Government and the foreign delegates as compared with those of the men teachers in France was very striking.

The functions and organization of practicing schools attached to training colleges and similar institutions.

Before proceeding to the discussions on training colleges we may intercalate a few remarks on their history:

In each stage of the strenuous development of education since 1879 the first step in France has been always to provide trained teachers, and to start from the broad base of the primary system. In England when any public or quasi-public body like the Society of Arts, the City Guilds, the Chamber of Commerce, or a government department, arranges for a new branch of education, the invariable plan is to examine the pupils and to "pay by results;" even to invite a teacher on the organizing committee while the plan is under consideration, is extremely rare.

The phrase *école normale* first occurs in a report presented for the committee of public instruction by Lakanal to the convention on October

30, 1794; there ought to be founded at Paris, says the first article, a normal school to receive citizens already acquainted with the useful sciences, that they may learn from the most capable professors the art of teaching. Although on January 20, 1795, 1,400 hearers came from all parts of France to the inauguration, the school was closed on the following 15th of May. Much was done during the first half of this century, but the realization of the proud scheme of the convention, not alone for Paris but also for the whole of France, was reserved for the pregnant ministry of Jules Ferry (February 4, 1879, to November 4, 1881).

On August 9, 1879, all the departments were commanded by law to found normal colleges for women; four years were given in which to fulfill the legal conditions, but at the present moment eight departments are still unprovided for. At the end of the last year France possessed 171 normal colleges, 89 for men and 82 for women; 29,919 pupils in all have been admitted; the budget of 5,627,702 francs in 1878 rising to 8,997,404 in 1888.

With the loyal coöperation of the various local powers, the ministry has striven with success to infuse into these normal schools a new spirit in harmony with modern ideas; to loosen the ties binding them to an obsolete past, and by improving the organization and discipline, to fill the pupil teachers with an adequate sense of the importance of their calling.

As a kind of *nervus nervorum* for these provincial training colleges, to train teachers for the training of teachers, two remarkable institutions, called *Écoles Normales Supérieures d'Enseignement Primaire*, have been founded at St. Cloud and Fontenay, the former in 1882 for men, and the latter in 1880 for women.

The third section of the congress was the first to hand in its report. It was in consequence taken first in point of time by the general assembly.

In opening the debates the president desired that they should be absolutely sincere; within the limits of the questions laid before the assembly any opinion might be freely expressed. The resolutions would then, if they were not unanimous, represent the real opinions of the majority.

This, we may add, represented the wish of the administrative powers. Indeed, such large meetings of teachers are generously meant by the Government to act as a check on the natural tendency of power to fall too exclusively into their own hands. A state department must of necessity work by definite rules, but overregulation is highly dangerous to education.

The report of the third section was read by M. Quénardel, director of the training college at Amiens.

The warmth with which several speakers expressed their opinions, the care they took to point out that their sole object was the progress

of primary education, prove the importance attached to the question we had to study. The need of a practicing school was affirmed by a very large majority.

Our foreign members helped us largely by an account of the procedure in their countries to arrive at the conclusion that the practicing school ought to be an integral part of the training college.

The organization of this school was a matter of long debate. Some desired that the pupil teacher should be taught to grapple with general questions in teaching, while others thought that, if he could be shown how to give lessons properly in that grade in which he would probably spend his time as a probationer, the school would have fulfilled its rôle. If the pupil teachers were initiated in the direction of a school with a single master—the commonest type in the country—so much the better. Probably it was excessive to expect so much. Our resolution took the form: The practicing school will be of the same type as the majority of the schools in the district. It will be a school with a single master and three grades. Who ought to be the head master of the practicing school? This again roused an animated debate, the differences being on matters of form rather than principle. A large number desired the administration to select some one among the primary teachers who had been engaged in actual work for some time; others considered the teachers in a training college more fitted from the attention they had paid to pedagogy and psychology. But the section, preferring practical experience, thought it desirable to make the post of head master an object of ambition to those teachers who had seen at least five years of service in an elementary primary school.

How much time ought the pupil teachers to give to their general education and how much to strictly professional training? "Leave things as they are," said some. "Devote the first two years to education and the third to training," said others. Since the elementary certificate is demanded of pupils at their entrance and since the curriculum of the training college has enough subjects already, we have agreed to recommend that the higher certificate should be taken at the end of the first term in the third year, thus leaving the last four months for the practical training. To insure the pedagogic value of the practicing school we think the marks attained in it by the pupil teachers ought to be of weight in their first appointments on leaving the training college.

The General Assembly accepted at once the first resolution unanimously:

I. A practicing school is indispensable for the professional education of the pupils of a training college.

The second resolution sent up by the section was this:

II. The practicing school will be attached to the training college.

One director, on the plea that these schools had not fulfilled expectations, proposed to grant the minister, in conjunction with the depart-

mental council, the power to close a practicing school; this was decisively rejected.

The discussion then began to trench on the third resolution as to the *type* of the school and led to some contradictory voting. After several amendments had been rejected the general assembly accepted by a large majority the wording of the section as above.

The form of the third sectional resolution was: The practicing school ought to be of the same type as the majority of the schools of the district, a school with a single master and three grades. This was amended by M. Lenient, and accepted after another long discussion by the general assembly as follows:

III. The practicing school ought to be of the same type as the majority of the primary schools to which the students will be sent on their leaving the training college.

The appointment of the head master was warmly, not to say fiercely, debated. Inspectors and teachers were manifestly on opposite sides. The bone of contention was the class of teachers from which he was to be taken and the time of service before he could become eligible. Ten amendments were sent in; the majority, coming from the teachers, tended to exclude the professors in a training college. M. Jacoulet, a general inspector and the head of the well-known college at Saint Cloud, protested against the injustice of keeping out the very élite of their profession; the training college was as much an integral part of primary education as the school. The final form of the resolution was:

IV. The head master of the practicing school should be chosen from among those members of public primary instruction who have served for five years at least and have shown pedagogic aptitude.

The fifth sectional resolution, containing three paragraphs, dealing with the time to be allotted to general education and to technical training was rejected piecemeal by the general assembly.

As M. Lenient pointed out, the students would hardly pay any serious attention to work lying outside of their preparation for the higher certificate. Since, too, the latest official programme dated only from January 10, 1889, it was too early to talk of lightening it. After the rejection of another string of amendments, the assembly refused to settle any date for the examination and contented itself with formulating as a final resolution:

V. In classifying the pupil teachers on their leaving, a special statement should be made of the marks obtained in the practicing school.

M. Gréard's Report to the Minister of Education.—The final general assembly took place on August 16, under the presidency of the minister. An account of the Congress was submitted to him by M. Gréard and ran as follows:

Our labors are now over. Since you opened the Congress we have met either in section or general assembly once and sometimes twice a day. You were desirous that our discussions as far as concerned the questions submitted to us should be

free and sincere. I think I can assure you that every variety of opinion has been able to find expression and that in the resolutions we have arrived at the exact expression of the opinions of the whole Congress or at least of an indisputable majority of its members. Our first question was on the professional teaching of agriculture, commerce, and industry. At first we tried to define the phrase "professional teaching;" we had to give up the attempt. A definition can hardly be made among two thousand persons. The commission at the Académie Française charged with the study of the dictionary consists of only three members, and they do not always agree at first. The place, however, of professional teaching in primary education was clear enough. Obviously it is neither apprenticeship schools, with their own methods and establishments, nor technical teaching, which necessarily connotes a special and direct application to trade, to industry, and to commerce. In primary teaching, the aim of which is a general education of the faculties of the child, professional teaching can only be a remote preparation for the exercise of an occupation, a foretaste, a bait, a means of showing the child the application of the general principles he has learned, the profit he can win from them, and the credit attaching to them. The resolutions of the Congress have been drawn up from this point of view. It is of opinion that professional training properly so called—naturally I except handicraft, which is nothing but a gymnastic of the hand and eye—ought not to be introduced into the primary school.

It is of opinion that agricultural instruction may be given both in the elementary and in the higher primary school; in the former by a suitable choice of readers and lessons; in the latter in the form of an experimental course; in both of course with a proper regard to the age and conditions under which the children have to work and to the actual needs of the district. It is also of opinion that, although commercial education ought only to be treated in the elementary primary school as a complement to the rudiments of the first stage in education, it might with advantage be developed in the higher primary school, taking due account of the relative importance and varying wants of local necessities. In the training colleges the pupil teachers may, we think with advantage, be initiated into the elements of agricultural and commercial instruction so far as may be necessary for the establishments to which they will afterwards be sent. The question of industrial teaching was not examined so completely; one thing, however, was clear, a belief that, except for what are called in France the higher primary schools, the introduction of industrial teaching was incompatible with the programme of the elementary schools as well as with that of training colleges. All these problems are intimately bound up with social questions; they are not pedagogic pure and simple; it is to the credit of the congress that they have been treated with a just sense of the actual condition of affairs.

The question of "practicing schools" is not a new one, and I can hardly say that it has been definitely treated. The difficulties of organization are the same to-day as yesterday. The debate, however, has brought into light the principles for a possible solution of the question. We agreed as to the need of a practicing school; to the need of attaching it to the training college; to the choice of the masters—primary teachers or professors of the training college—to whom the direction ought to be confided. From both we demand at least five years of actual experience and a well-recognized pedagogic ability. We were agreed, too, on the necessity of recognizing, independently of the other examinations, the professional work done in the practicing school.

These conclusions, however, were not arrived at without debate. Indeed it sometimes happened that the resolutions of the section, although carried after considerable discussion, were completely modified in the general assembly. But these changes of opinion served only to bring into relief the fundamental points of the controversy. Whether the practicing school be made independent of the training college or not, whether the teaching be modeled on one type—the school with a

single master and three grades—or whether the organization be varied with the district, the one important point recognized was this, that it was the duty of the training college not to train for an examination, but to make future educators, men, that is to say, capable of bringing their knowledge under discipline, of adapting a lesson for a class, of teaching the same subject in a different way according to the age, the knowledge, and the ability of their small audience; capable, above all, of watching a child's character, of keeping his good and bad sides distinct, of teaching him to get control over his inclinations, of habituating him to enter into the possession of himself; in short of bringing to bear upon his mind and his character a genuine influence. Such is the real object of the apprenticeship in the practicing school. Happy are we if we can devote time enough to this professional training!

In mentioning the place of women in education you have, sir, pointed out how France stands midway between those countries, such as America, where all educational functions are open to them and those where everything is closed. Indeed, the French law gives women an exclusive right to some posts, such, for instance, as the direction of maternal schools, which I remember I have seen, less than twenty years ago, in the hands of men. There is an inclination to admit women to the like rights for mixed schools, nor is the power to enjoy the highest functions of inspection of all kinds refused; if the barriers have not been removed, they have at least been lowered. I must, however, as a faithful reporter, confess that the congress has not been so liberal as the law. It was only after a prolonged struggle that the right to share in the direction of mixed schools was admitted; except in the case of maternal schools, the congress was of opinion that the cares and fatigues of inspection should be spared women as much for their sake as for that of the public. I am not aware if these reasons have convinced those interested. Some of them disdained any ambition for delicate and lofty reasons. On the whole, they were jealous of the authority which the congress was not inclined to grant them. For my part I should take the side of the minority. As I have ventured to state my opinion, permit me to justify it. The sole point to make me pause in making men and women inspectors would be the dual powers and the possibility of a conflict in the management of schools; conflicts are always undesirable, more especially when authority needs to be exercised with sequence and harmony. As to the capacity of women for wielding control, I have more confidence than they have themselves in their quickened sympathy, their gentle and firm reason, their habits of self-denial. Education and all connected with it demand self-sacrifice. And where can we find this self-sacrifice more complete than in women? Feminine pedagogy as a whole is founded on this principle or sentiment. I do not intend to claim this virtue specially for the French school. The woman who gives herself up to others belongs to every country.

You see, sir, the three questions have been discussed, as they deserve to be, with interest and animation and, I may add, at times with passion. We do not complain. It was Montesquieu who said: "Passion alone illuminates."

We owe much to our foreign delegates. We feel touched and honored by their presence. They have helped to give an elevated turn to our discussions. We have been fortunate in listening to M. Lyulph Stanley, one of the most eminent members of the London school board; M. Gavard, head of the department of public education in the canton of Geneva; M. van Meenen and M. Houzeau de Lahaie, of Belgium; Miss Beale, the head of Cheltenham Ladies' College; M. Pizzurno, the delegate of the Argentine Republic; and many others who have lent us the aid of their experience and authority. I am sure that I carry the feelings of the congress with me in thanking them for their presence.

The foreign members returned thanks in speeches that were warmly applauded.

The minister then invited the three sectional reporters, MM. Martel,

Delapierre, and Quenardel, to read the final resolutions. In closing the congress the minister gracefully thanked the foreign representatives, together with M. Gréard and M. Buisson. Ministers change, he continued, but thanks to the perseverance and the genius of the men who remained, the great movement of education had been made possible and carried out. As M. Stanley had said, it seemed formerly as if the three degrees of education had nothing to do with one another, each following its own aim in its own way. But to-day they formed a trinity whose unity was recognized.

The Republic had the honor of bringing primary instruction into this fruitful and vivifying union. By a lucky coincidence the centenary of the French Revolution has seen the realization by law of one of the highest inspirations of the revolution: primary instruction given by the state and become the leading public service. From the debates he hoped to get, in the phrase of Rabelais, "the substantific marrow." However much was done in primary education there was still always something to do. The legislators made the laws, but the teachers had to apply them; it was for them to show that, in the new and delicate parts of these laws still new to many, the government of the republic had worked for peace no less than for emancipation. The women teachers had nothing in common with the blue stockings, turned into ridicule by Molière; in girls' schools they had a no less important task than the men in boys' schools; the democracy needed women, educated, strong, and virtuous. Both men and women were conscious of their duty; they had to form men for France and citizens for the Republic.

An anonymous donor had given 900 francs to be shared among the writers of the best memoirs sent into the congress. In all ranks of society there are men who do good silently. Democracy, in spite of its adversaries, is not made to abase, but to elevate.

SECTION IV.—THE CONGRESS ON SECONDARY AND HIGHER EDUCATION.

Although not honored with the presence of the minister nor attended by so many members, the proceedings in the secondary congress lacked neither animation nor importance. Indeed, when over it seemed all too short.

There were 422 members, of whom 121 were foreigners, and of these 12 were Americans. The English head masters were conspicuous by their absence. The attendance at the general assemblies varied from 60 to 80; a striking contrast to the primary congress.

At the first general assembly, on August 6, under the presidency of M. Gréard, the bureau of the committee of management was confirmed and nineteen visitors were invited to join it, among them being Mr. Clarke and Dr. Harris.

The vice-presidents were MM. Bréal, De Lapparent, and Morel; the general secretaries were MM. Dreyfus-Brisac and Perrier.

Agreeably to the regulations the general assembly split up into two sections. M. Bufnoir was elected president for the section on higher and M. Morel for the one on secondary education.

As we have already mentioned, the five questions settled on beforehand had been treated by various hands and their articles published by the minister of commerce, industry, and the colonies. They were:

1. Extent and sanction of secondary studies (matriculation, leaving certificates).
M. H. Pigeonneau.
2. The international equivalence of studies and degrees. MM. Bufnoir and Th. Cart.
3. The various types of secondary education; what relative weight ought to be ascribed to the classics, to modern languages, and to science. M. A. Croiset.
4. By what methods ought secondary instruction in modern languages and science to be given to girls? MM. Bossert, Darboux, E. Perrier.
5. On the place of economic and social science in higher education. M. E. Boutmy.

Extent and sanction of secondary studies.

The first question was both international and specifically French. It may not perhaps be superfluous to state that a bachelor in France stands at the beginning of his university career, in England at the end. The article of M. H. Pigeonneau, after mentioning the official inquiry of 1885 and the report of M. Gréard,* finds three essential points in the question proposed: (1) Is a sanction for secondary studies advantageous? (2) What are the advantages and disadvantages of the various systems at present in vogue?

Simply to abolish the baccalaureate would lead to chaos in the schools and the intellectual disorganization of the country; besides, Belgium tried the experiment in 1854 and 1876, the baccalaureate was postponed to the end of the first year at the university, but made the final school examination again in 1861 and 1888.

There are four principal ways in which a certificate can be given at the end of the school career: (1) With or without a special examination by the members of the establishment in which the child had been educated, without the intervention of any outside body. (2) A university examination before professors or a special body of examiners and simply conferring the right to matriculate. (3) An examination in the school by the teachers, but before representatives of the state, who have the power to confer certain rights, such as entrance to the university. (4) An examination outside the school by the State, on a programme more or less like the one used in the school.

After characterizing shortly the type of examination in England, America, Prussia, Austria, Holland, Belgium, Denmark, and Norway, M. Pigeonneau considers the German the most satisfactory. The pupil's school life is taken into account; he does not feel out of his element (*il ne le dépayse pas*), as the examination takes place in his own school,

* Revue Internationale, September, 1886.

before his own masters, and without any special preparation outside of the regular curriculum. The written examination preponderating over the oral makes it possible to test method, composition, and style, things that can not be crammed and that best prove a general education, the special aim of a secondary school. Incapacity can present itself not more than three times. The presence of a state official sustains the level and dignity of the examination.

The most reasonable of the numberless objections urged against the baccalauréat are that as it opens the road to the professions and public life it has become not the sanction but the end of secondary education. Subjects not on its programme are quite neglected; the candidate and the examiners are strangers, while the element of chance is too great. The university professors are burdened with the correction of papers and the permission to try indefinitely makes the baccalaureate a certificate of obstinacy.

The labors of the section on this question were brought before the general assembly on August 10 by M. Max Egger. We give a résumé of his report:

The section at once adopted M. Pigeonneau's first conclusion: *It is necessary for secondary studies to have a sanction.*

Several interesting details on the manner of applying the tests of efficiency were given by the foreign members. In Switzerland, for example, in every examination for passing from one stage to another the average of the marks obtained during the year count one-half. This plan was only possible in some special schools in France, such as the polytechnic, central, naval, etc. Insistence was laid on the fact that the baccalauréat was not a competitive but a pass examination, and that the future life of a candidate depended on his success in it. It ought, therefore, to be obtainable by every candidate of fair intelligence who had worked for it conscientiously. According to M. Rabier, the precautions taken to render any injustice impossible were inadequate, being less than those for any small legal case. In consequence of these remarks M. Pigeonneau added a supplementary resolution to his second conclusion, the two running thus:

The best form of sanction is that which permits the conscientious and average pupil to obtain the final diploma without any special preparation or strained efforts, but simply by following the regular course of studies.

Whatever plan of sanction be adopted, it is desirable for the acquirement of the diploma at the end of his studies that account be taken of the prior marks obtained and of the class of the pupil in the establishment where he has carried on his studies.

This again brought into light the various applications possible in countries that varied in their political and social conditions; each country must determine for itself what weight the body of examiners ought to give to the pupil's former training.

M. Blanchet wished to define the proper method more exactly by proposing the plan of examining the candidates by their own teachers in the presence of representatives of the state. But this was held to trench on politics and to be therefore out of place in a pedagogic gathering. From an ideal point of view, as M. Dreyfus-Brisac showed, the plan was excellent, but in France, for example, the legislator would be met by varied and numerous difficulties—the inequality of studies in state and private establishments; the difficulty of procuring teachers with sufficient authority. In cases where several different interests were concerned, recriminations would be sure to arise when students failed to pass their examinations. The state delegate would be the scapegoat for all sorts of complaints.

In the case of private establishments the students would have to appear before a state jury, in which they would not find their own masters, or the latter would be given the important power of conferring an official certificate. Again, private establishments would then have to be divided into two classes, those that were and those that were not worthy to conduct the examination.

In fact, it was not desirable to go further than M. Pigeonneau's resolution, embodying, as it did implicitly, M. Blanchet's proposal—the best way to learn of a student's industry and capacities was to hear the opinion of the masters he had been under.

A third motion due to MM. Herzen and Pigeonneau was also accepted by the section: *The three sanctions for the three types of secondary education give admission to the corresponding types of higher education.* Attempts to further define the mode of application of the various sanctions were not accepted as they were not international, and examinations were already sufficiently complicated. The General Assembly practically adopted the report. The first two resolutions were:

I. It is necessary for secondary studies to have a sanction.

II. The best form of sanction is that which permits the conscientious and average pupil to obtain the final diploma without any special preparation or strained efforts, but simply by following the regular course of studies.

The third resolution seemed too absolute to the rector of Montpellier, as the variety of secondary establishments was so great; at the suggestion of M. Chappuis it was amended into:

III. Whatever plan of sanction be adopted it would be desirable for the acquirement of the diploma at the end of his studies that account be taken of the prior marks obtained and of the class of the pupil in the establishment where he had carried on his studies. M. Blanchet proposed that: The candidates be examined before a jury composed of the masters and a delegate of the state.

M. Chappuis resumed the discussion in the section and moved the rejection of the motion. M. Lichtenberger, however, thought the plan desirable from a purely pedagogic point of view, and that the conflict-

ing claims of the state and the particular establishment might be reconciled.

The staffs, according to M. Morel, varied so much in value that the jury within the establishment was impossible.

Dr. Lagneau thought it desirable to have several partial examinations to settle the marks given.

M. Pigeonneau thought it undesirable to specify the details, and on the proposal of the president the Congress passed on without taking a vote.

The next resolution of the section was accepted:

IV. The three sanctions for the three types of secondary education give admission to the corresponding types of higher education.

M. Herzen wished the careers, to which these sanctions would lead, to be specified. This, M. Urechia pointed out, was trespassing on the domain of higher education. "In that case," replied M. Herzen, "we are making three keys, of which one will open the doors of all the faculties and the other two will shut them." "Then we must make special locks," replied the president.

The international equivalence of studies and degrees.

For the truly international question of the equivalence of degrees, there were two articles due to the pens of M. Bufnoir and M. Cart.

Although, says M. Bufnoir, books and the press spread rapidly the discoveries and researches of scholars, the living voice of a professor and the intellectual atmosphere of a university form the most powerful stimulus for a young student. How far can we accept foreign tests as granting admission to try for a higher degree? To students who simply desired to listen the lecture rooms of France have always been open, but an official sanction can not be obtained unless the monetary regulations, as fixed by the decree of April 22, 1854, are complied with.

In the old French faculty of law at Strasburg strangers could obtain an official recognition of their studies and examinations, shared with the French, provided they did not claim the right to practice in France. Such a permission extended to medicine would be certain to attract many foreigners. The case of a student at one university who wishes to carry on his studies abroad without a breach in their continuity adds another difficulty to that of money.

The points about which the labors of the congress must turn are thus formulated:

(1) To state exactly the regulations of different countries limiting admission to higher education.

(2) To examine if it be useful and possible to make any modifications with a view to an international rule. This would lead to three questions for debate:

(a) Is it desirable and possible to establish an international equivalence of diplomas or certificates giving the right to pass from secondary

to higher instruction? Might admission, with or without restrictions, to higher instruction be granted to a foreign student simply on his showing that he possessed the necessary qualifications for admittance in his native country?

(b) Is it desirable to recommend as a useful international practice the concession of the power to keep terms at a foreign university?

(c) Is it desirable and practicable to establish an international equivalence of degrees either from the scientific point of view for obtaining a higher degree or from the professional point of view.

M. Cart's memoir studies the question as far as it affects degrees in arts. In 1877-'78 the Paris faculty of letters had 6 students; in 1887-'88, 1,200. This remarkable rise is ascribed to the "*cours fermés*" as a supplement to the public lectures of the professors.

A foreign student would, of course, wish to join this private course, when the real, serious work is done and the personal influence of the professor comes into play. Admission, granted so as not to destroy the homogeneity of the class, must carry with it the right to proceed to the final examination. A comparative table is given of the subjects demanded by the different countries for the examination corresponding to the Baccalauréat-ès-lettres and another for the Licence-ès-lettres in France and French Switzerland. To draw up these tables must have been a delicate and difficult task; indeed, we can hardly expect one man to do it without putting widely different things together. A London master of arts would not care to consider his examination no harder than that of moderations at Oxford. Again, the Cambridge bachelor of arts may mean with a high wrangler the display of ability capable of taking any degree in Europe or the modest intellectual equipment of a pollman, who probably "gets through" on less than a French *bachelier*. The pollman and the wrangler can both become masters of arts—by the payment of a sum of money. The original office of universities, viz, to supply teachers shimmers through this arrangement. The bachelor had proved his knowledge; after three years' probation and exercise he was fit to begin the practice of the *art* of teaching, for which naturally an examination at that time was impossible. The need for a full preliminary digest of the regulations actually in force at present was shown at the first meeting of the section on August 7, when the whole of the morning sitting under the presidency of M. Bufnoir was taken up by statements from the different delegates of the procedure in Belgium, Italy, Switzerland, Mexico, Austria, Greece, England, Egypt, Holland, Roumania, and Spain.

After some interesting discussions, the section determined to send up to the general assembly as affirmations the three questions (a), (b), (c), as above, with the important elimination from (c) of "the professional point of view."

The report of the section was presented on August 9 to the general assembly by M. Th. Cart.

From our foreign members we have learned that almost all of their universities demand, on the student's entrance, some certificate of serious secondary studies. *All* of them allow strangers to enter the various faculties without the payment of fees, provided they can show a diploma analogous to the one necessary for the native student. Sometimes the permission to attend lectures is granted by the faculty concerned, but more generally a decision made once for all by the higher authorities confers real privileges on the possessor of a foreign diploma. Under certain restrictions the majority of the different universities permit a student to keep some of his terms at another university.

From a professional point of view some of the faculties, such as law and medicine, require a supplementary examination of a special character. A medical student, for example, must diagnose a patient, perform a surgical operation, or answer questions on pathology.

Although our first meeting was one of exposition rather than discussion, a unanimous desire to make the entrance to various universities as easy for the student as possible was made plainly manifest. The question naturally became more complicated when an attempt was made to define the necessary restrictions for admission, and the right authority to grant it, and to settle the proper equivalence between a foreign and a native diploma.

Some were of opinion that the method actually in vogue in France was liberal enough; that the government only in conjunction with the faculty concerned ought to grant the equivalence. This would insure an adequate preliminary training and aid the government in case it seemed desirable to refuse the equivalence. Others considered that this would lead to an arbitrary exercise of power; that a favor and not a right would be conferred. The foreigner, not being quite certain of obtaining the favor, would be shy of visiting a foreign university. With regard to admission to the various faculties, it seemed desirable to fix the value of a foreign diploma once for all, and thus the right of entry would be guaranteed to the foreign student.

A special commission would examine the various foreign sanctions for secondary education and settle definitely their relative value to the home sanction. This equivalence would of course hold only so long as the foreign sanction remained unchanged. Others, again, wished to make admission still more easy. They proposed to ask from the foreign student only such a sanction as he would have to show in his own country in order to proceed to a higher study of the same kind. This solution was hardly possible except on the condition that the foreigner, having obtained his degrees elsewhere, should practice only in his own country. Indeed, as the demands made abroad might be less at the commencement the native student would be unfairly treated.

Besides, it was remarked that, as the diploma would be of value only in another country, its value there would not be rated high.

There were, then, four opinions:

(1) The examination of each particular case by the faculty concerned.

(2) An examination by a special commission to settle definitely on the equivalence of foreign diplomas.

(3) Admission of foreign students to the faculties simply on the production of the analogous sanction demanded in their own country, with the reserve that the diplomas granted would be recognized only in that country.

(4) The unreserved admission of such students as the ones mentioned above.

The discussion seemed in danger of never coming to an end. On the motion of M. Gavard, details were left on one side, and M. Bufnoir's rédaction was accepted with a slight modification: *It is desirable to establish the international equivalence of diplomas or certificates giving the right to pass from secondary to higher education in its various forms.*

The proposal of M. Casanova, of Madrid, to appoint an international commission to find the best way of settling equivalence by obtaining uniformity in studies was considered impracticable.

M. Bufnoir's next proposal was accepted unanimously: *It is desirable as an international custom to allow students the right to pass a part of their university terms at a foreign university.*

From M. Bufnoir's next proposition the words "from a professional point of view" were at once eliminated. The conditions in different countries were so various that no profit could be derived from discussing them.

M. Urechia, formerly minister of education in Roumania, desired the University of France to take the lead in forming an official congress in which every university would be represented; they would then settle the minimum required for the various degrees. Such a federation of universities would then be able to settle all questions affecting the equivalence of degrees. The practical difficulties in the way of such a scheme were so great that the section passed on to the following resolution: *It is desirable to grant, after evaluation, and without any distinction of nationality, the international equivalence of examination certificates and degrees as the condition for trying for a higher degree.*

The section considering the advantages accruing to a student from study at a foreign university and the advisability of maintaining a high level of study by admitting to a faculty only those who were properly prepared, submits the above three resolutions to the congress.

Besides this report of M. Th. Cart's, M. Bufnoir, in an admirable speech, summed up the labors of his section, and made an eloquent protest against the tax laid on foreign students in France.

In the first resolution the words "*to maintain and to establish,*" etc., were added on the proposition of M. Gentet. A remark that students in Germany were allowed to visit other universities was corrected by

the observation that this permission applied only to medical students and philologists.

On the motion of Mr. Lyulph Stanley, copies of the resolutions will be sent to all foreign universities.

Careful emphasis was laid on the point that the equivalence of degrees was concerned only with the scientific side; the right to practice could, of course, only be granted by the state.

The final form of the resolutions was as follows:

I. It is desirable to maintain and to establish the international equivalence of diplomas or certificates giving the right to pass from secondary to higher education in its various forms.

II. It is desirable to recommend as an international custom to allow students the right to pass a part of their university terms at a foreign university.

III. It is desirable to grant, after evaluation and without any distinction of nationality, the international equivalence of examination certificates and degrees from the scientific point of view, as the condition for trying for a higher degree.

These resolutions were all accepted unanimously. The evident desire of the various speakers to remove, as far as possible, all the barriers to a free intercourse between university students, was one of the many pleasant features of the Congress.

The various types of secondary instruction; what relative weight ought to be ascribed to the classics, to modern languages, and to science?

Fifty years ago, says M. Croiset, the sole type of secondary instruction was the classical grammar school. The various substitutes or competitors suggested since may be considered as due to the demand for a modern type.

Is it feasible to teach one of the ancient languages without the other? How much science ought to be taught in a classical school? How much time can be given in it to modern languages? In a modern school without classics can a harmonious and disinterested culture be obtained, or must the school be content to give something between primary and secondary instruction of practical value and immediate application? Should a preponderance be given to science or to literary culture, obtained from the native language? If Latin is necessary as an entrance to certain careers, the question ceases to be pedagogic; better leave it alone altogether unless the study can be pushed far enough to yield some literary value.

To sum up:

(a) Ought not our modern secondary instruction to be literary in a larger degree?

(b) Is it desirable to introduce Latin?

(c) Ought not the teaching of modern languages to be made more important and more literary than it is at present?

M. Chassiotis desired a single school taking science and literature abreast up to the point where specialization had to come in. M. Herzen followed in the same sense. A full exposé of his views will be found in an article published since the Congress in the *Revue Internationale* (October 15, 1889). The classics promise much, he said, but the results are often deplorable; children are all forced into the same procrustean bed as they begin their study before any appreciation or capacity is possible. Since the object of secondary education is to give the widest possible *general culture*, bifurcation must be deferred till after the final school examination.

The experience of City College, New York, and we may add the case of Miss Ramsay, the late senior classical, Cambridge, go to prove that the study of the classics suffers nothing from being begun late. Establish a primary school for children from 7 to 12, so as to give a provisional selection; from 12 to 14 have an intermediate school with a definite selection of those fit to proceed to secondary education.

M. Croiset replies that the experiments made at the Lycée Charlemagne, in imitation of City College, are not favorable. M. Michel Bréal fears overpressure if the study of Latin is put off till 12 or 13. M. Herzen ascribes overpressure to bad method rather than to the number of subjects. M. Collard says that the attempt to begin classics late had to be given up in Belgium. M. Herzen's motion for postponement was not adopted.

Must Latin and Greek be both maintained, asks the President? Although in case of absolute need Latin should be sacrificed to Greek, it was felt that the two must stand or fall together. A German society for establishing a school teaching Greek and not Latin was still-born.

The general assembly took up this question on August 8. The report was read by M. Max Egger and ran roughly as follows:

Before entering on the study of the different forms of secondary education, the proper age at which to begin the classics was brought into discussion. Prof. Herzen desired that "the coupling of primary and secondary education should not take place before the end of the fourteenth year." This was desirable on "pedagogic, individual, and social grounds." Teaching would then be given only to a body of pupils selected after a really serious intellectual examination such as was practiced at City College, New York. As the teachers would have only apt pupils before them, the instruction would be more sure of success, and the elements excluded would have to take up with practical studies that were more suited to them. A large majority of the section agreed with M. Bréal that the system suggested by M. Herzen would lead to overpressure; already in France, where the study of Latin does not begin till 11 or 12, there is a real connection between overpressure and putting off the study of the classics, because it has then to be compressed into a smaller number of years. The section agreed with M. Croiset that the study of the classics must be carried on leisurely in

order to be fruitful; only by a direct and protracted intercourse will the pupil read the ancient authors and enter into their ideas. What will happen if we put off the beginning, not till 11 or 12, but to 14? Another objection was pointed out by MM. Harlaux and Hurdebise, viz, that the method of elimination proposed by M. Herzen would drive many into private schools, where they would receive a classical education denied them by the state, and thus public education would lose in value and respect.

That being settled, the next proposition was received without discussion: *It is desirable to recognize and to establish several forms of secondary education.*

In laying down the general character of the various forms, the section began with the oldest: *It is desirable to make the study of Greek and Latin simultaneous and obligatory.*

M. Herzen's proposal to make the study of Greek optional was rejected. Every optional subject, even if you can find amateurs to teach it, tends to overpressure. Besides there is no reason why a pupil good at Latin should not be good at Greek as well, though the latter is somewhat harder.

"You can not eliminate Greek from any genuine classical education, as its aim ought to be to develop the mind by tracing the affiliation of ideas and the progress of civilization to their Greek and Latin sources; as far as the ideas and forms of classical literature are concerned, what we get from Greece is not only of great value in itself, but is the origin of what has come to us through Roman civilization," said Mr. Lyulph Stanley. "A school can not make Greek optional," said M. Cart, "for Latin must be taught in different ways to those who do and to those who do not learn Greek."

For the second type of school, for those who intend to follow a scientific career, the one ancient language to be admitted was obviously Latin.

A proposal in Germany, said M. Erkelenz, to make Greek the sole ancient language taught in school, never came to anything. The section then adopted this resolution: *It is desirable to admit another type of secondary education in which Latin would be the only ancient language taught.*

What would be the position of science and modern languages in these two types of school? The section adopted the opinions of M. Croiset in his article: For the future men of science it is desirable to make the general culture as ample as possible before they get absorbed in their specialties; for the future men of letters an adequate training in the intellectual faculties, touched by science, was necessary. The section formulated its opinion thus:

In both types of secondary education, the study of science, although subordinated to the study of literature, ought to be seriously carried out, that is to say, slowly, gradually, and methodically; for the pupils destined to a

scientific career, separation and consequently specialization ought to be put off as long as possible.

For modern languages the section at first voted this formula: *It is desirable to make the teaching of foreign languages practical in the lower classes and literary in the higher.* The pupil as he gradually grows interested in the ideas of the Greeks and Romans would naturally demand a literary flavor in his study of modern languages. When ought he to begin? M. Gauthiot wanted to commence as late as possible, as the pupils retain only what they learn last. To this the section replied that it was undesirable to put off the study of modern languages till the middle of the classical course, with the intention of doubling the time devoted to them in the higher classes. Besides, it is not so certain that the pupil forgets so readily. When he is young he can retain words by memory, and the greater flexibility of his organs makes a correct pronunciation easier.

What are we to understand by practical teaching? One party agreed with M. Rabier, in relegating the art of writing and speaking to a secondary position. Reading is more important not only from an intellectual point of view, but practically as well; by reading we get to know books, reviews, journals, and to learn the literary, scientific, and commercial condition of a country; in actual life we have more often to read than to write or speak.

Another party thought, with M. Bréal, that the possession of a modern language ought to be active; the value of exercises and translations had been exaggerated; the best teacher is the one who never pronounces a word to the pupils, in class, of their native language; from an international point of view it is desirable that the pupils in a lycée should be accustomed to express themselves in a foreign language; they would then wish to perfect themselves abroad, not with a view to talking to a guide or to hotel-keeping, but to study at a university or to mix with the educated classes of the country they were traveling in.

M. Gréard reconciled both parties with the following resolution adopted by the section: *In the study of a modern language, two things are to be acquired—the possession of the language and an acquaintance with its best literature.* Finally a third type was accepted, with the name given to it by M. Croiset, a secondary modern education, having for aim a harmonious and disinterested culture of the mind. His formula at the end of this article was accepted, with an important alteration in the first resolution:

(1) *This education ought to be both scientific and literary.* (2) *Latin will not be admitted in it.* (3) *It is desirable to give greater weight to the teaching of modern languages and to make it more literary than it is at present.* The object in insisting on the words *greater weight* and *literary* was to show that the teaching, without neglecting the practical side, should elevate the intelligence and the feelings of the young and make the whole of this modern instruction attractive.

The discussion opened with M. Herzen's proposal to make the secondary and primary schools fit into one another for children of the age of 14; this was rejected.*

M. Micé desired that the higher primary school should be transformed into a professional school so as not to compete with the secondary school, but his motion was put aside as trenching on the primary congress.

The resolutions of the section were then taken in order. The president explained that the types might be reduced to three, as was the case in Belgium: (1) Classical; (2) Latin without Greek; (3) Modern, without Latin or Greek. After a few remarks the general assembly accepted the resolution:

I. It is desirable to recognize and to establish several forms of secondary education.

For the second question the president pointed out that the section had decided against making Greek optional for fear of overpressure and the Congress had already implicitly accepted a secondary type with Latin only. Mr. Lyulph Stanley supported the views of the section, adding that if one of the ancient languages had to be sacrificed Latin should go before Greek. The assembly accepted the resolution of the section:

II. It is desirable to make the study of Greek and Latin simultaneous and obligatory.

A pleasant change from the sober propriety of a public meeting was afforded by the animated talk, chiefly among the French members of the Congress, set going by the discussion on the proper name to apply to the type of school teaching Latin without Greek.

Ought "classical" to be retained as denoting an education with a disinterested aim? Would "semiclassical," "Latin humanities" do? At last, with more accuracy than elegance, the following names were given to the three types: *Enseignement classique gréco-latin*; *humanités latines*; *enseignement secondaire moderne scientifico-littéraire*. The resolution of the section was then adopted in the form:

III. It is desirable to admit another type of secondary education, in which Latin will be the only ancient language taught.

For the classical school a fair amount of science was considered necessary, less, of course, than in the "Latin humanities," and still less than in the modern school.

The report of the section on modern languages was adopted on the whole. Both MM. Rosenfeld and Dietz claimed that the time given to them should be increased in all the classes. The Congress accepted M. Lyulph Stanley's formula:

IV. In the lower classes as large an amount of time as the other branches of instruction will admit should be given to modern languages.

* A full statement of M. Herzen's views may be found in the *Revue internationale*, October, 1889.

M. Morel then insisted that the chief weight in the teaching should be laid on reading the best authors, in which he was supported by Mme. Griseri and M. Erkelenz.

If, said M. Bréal, the method of learning the ancient languages was applied to the modern he should protest. They would then be on a false track. After so many years of study can we say that we are really in possession of Greek and Latin? We only possess a language when we speak it. To understand a text is not enough. To be able to manipulate a language showed mental activity; and conversation, even though inaccurate, proved the possession of more knowledge of a language than a translation, dug out of the dictionary, of Goethe or Shakespeare.

If, then, the insistence on the word *literary* meant the application to modern languages of a method proper for the classics that method would be wrong. The point was not to compare, but to comprehend; the best teacher of a foreign language would be the one who did not use a native word during the lesson. Comparisons are only of use to the student who has a good command of both languages. With regard to modern secondary education M. Morel explained that the section had altered the words of M. Croiset's article "literary in a large degree" into "scientific and literary." M. Dietz preferred that the modern type of education should be principally literary and proposed a motion to that effect, which was lost. Science, said M. Micé, is too important to be relegated to a second place. As to the rôle of Latin in the modern school the most contradictory opinions found expression. When at last the president put the question "Ought Latin to be retained?" it was negatived and another motion to make Latin optional was promptly rejected. Thus the final resolutions accepted ran:

V. Modern secondary education ought to be both scientific and literary. Latin will not be admitted in it. Greater weight ought to be given to the teaching of modern languages, and it ought to be made more literary than it is at present.

By what methods ought secondary instruction in modern languages and science to be given to girls?

This question was taken by the General Assembly on August 9 and naturally called forth considerable discussion.

For modern languages an article had been written by M. Bossert, which to an Englishman seems intensely French. Is the study of the classics more likely to produce a bluestocking than that of modern languages? Then a boy studying classics will be more of a pedant than his brother on the modern side.

"A woman," says M. Bossert, "learns a foreign language as an ornament for her mind, a help in conversation, a backbone for her leisure hours, and a means of communication with her fellows. She lives in the present, and after her duties to her family she is made for society."

The teaching at first will be almost entirely by imitation to enable her to express her thoughts in a foreign language; by means of written work the grammar can be employed by way of control; above all, the teacher must avoid being dull. For the literature read rather those authors who, "without being the most perfect, express the peculiar genius of their native country most faithfully; they seem to have a more delicate ear for that voice which speaks in the bosom of a nation."

The report on modern-language teaching was read by Mme. Soult.

Our section was of opinion that the practical teaching of modern languages ought to begin as soon as possible, and the theoretical to be put off till the child had acquired the first notions of grammar in his native tongue. By beginning the practical teaching early the child gets accustomed to the foreign sounds and learns easily how to pronounce the foreign words. The study of the vocabularies, which Miss Beale aptly called the gymnastics of the language, can be done without too much strain by constant repetition, and by learning slowly the child will learn well.

The teaching must be oral; the child will get accustomed to speak and to understand a foreign language when it is spoken to him; of course some notions of grammar must be given, as it is not possible to speak correctly without it. This needs a great deal of time. In our secondary schools English and German must be begun as soon as possible, say at the age of 8 or 9; teachers had been demanding for some time at least half an hour a day in the lower classes for a foreign language, and this claim ought to be granted, as it would only amount to two hours and a half a week, while in England and the United States six hours a week were given to modern languages.

The strictly theoretical teaching, that is to say, the study of the syntax, of comparative grammar, of foreign literatures, ought to be commenced as soon as the children had learned to express themselves with some facility, when, at 12 or 13, say, they had overcome the elementary difficulties of their own tongue. Theoretical instruction ought, then, to take a large share in the teaching of modern languages. Indeed, it was not enough to speak one or more foreign languages; their study ought to have something more than a practical aim; they ought to afford a means of education, to develop the mind, to elevate the feelings, and widen the circle of knowledge; for with girls foreign languages ought to take the place of the classics. By comparative grammar they will better learn their own; by translation they will become accustomed to expressing new ideas in their own language; by translating into a foreign language they will learn to apply the rules of syntax. At this point girls may be introduced to the great works of foreign literatures, taking at first modern authors, until they have ripeness of mind enough and a deep enough knowledge to understand the beauties and delicacies of the foreign tongue.

In nearly all countries the children study two or more foreign languages. In France they take English or German. If the teaching

began sooner it would be possible after three or four years to add a second language without injury to the first; indeed this is what many pupils do privately at home.

Both practical and theoretical teaching have their special importance. The practical, appealing rather to the memory, to the flexibility of the organs, ought, of course, to precede the theoretical, where reasoning and analysis come into play.

On one point we were all agreed: Linguistic studies are not truly fruitful unless we awake such a love for them that the children on leaving school continue to read English and German books, unless they visit the countries whose languages they have learned, just as a large number of strangers come every year to study our language and our literature.

After a chatty exchange of opinion, mainly between the ladies present, the general assembly accepted the first resolution:

I. The practical teaching of modern languages ought to begin as soon as possible.

On the next resolution M. Bossert remarked that it was necessary to start with some sort of vocabulary. In the grammar it was advisable to distinguish between that which passed from the example to the rule—to be begun as soon as possible—and that which passed from the rule to the example—to be put off as long as possible.

With this reservation the second resolution was adopted:

II. Theoretical teaching ought to be put off until preliminary notions have been acquired in the mother tongue.

The president remarked that as the study of modern languages is a branch of general culture it is desirable that girls should travel in the country whose tongues they had learned. In reply to a question from M. Herzen, he said that Latin would be optional in secondary schools for girls.

M. Dietz made a proposal to the effect that in the lower classes of girls' schools the same teacher should take, as far as possible, both the native and the foreign language. In this way time would be saved. M. Erkelenz was of opinion that in this case the girls would leave school knowing neither thoroughly.

M. G. Morel pointed out the practical difficulty of finding such teachers.

On the motion of Miss Beale it was held desirable to seek a general formulary for grammatical terms.

One of the speakers thought it desirable to teach the single sounds of a foreign language at starting. This was said to be impossible, as an ordinary speaker can not pronounce the single sounds in his native language by themselves, *e. g.*, the *o* in the English *not*. For some time the teacher must be content to bathe the ears of the children in the foreign sounds, without demanding any reproduction from them. Since the native habit of the tongue is a natural hindrance a thorough gym-

nastic in the home language of the organs of speech must come first.* The assembly accepted from Mr. Widgery a motion affirming the need of a practical and theoretical knowledge of phonetics for the language-teacher.

Another important consideration may be added: it is undesirable, as M. Cart says, for a teacher and his class to belong to different nations; if then an Englishman has to teach English boys French, and simple imitation be as a rule powerless to give even a fairly good pronunciation, phonetics become imperative. In England a foreign teacher is nearly always chosen because of his "good accent;" but what is the value of the most perfect accent if the children have not the skill to imitate and the teacher has no knowledge of the physiological production of the sounds he is uttering? Not the possession of knowledge, but the power to impart it, is our primary want in the school. Pupils often turn out better artists than their drawing masters, and it is quite possible that a phonetically trained teacher may obtain from his children a better pronunciation than he is capable of himself. M. Michel Bréal pointed out the importance of geographical considerations in determining the foreign language to be taken up in the school curriculum. In the south of France, Spanish and Italian would replace the German and English of the north. May not a similar argument be applied to the vexed question of Latin? If we determine the amount necessary for secondary schools by the historic intimacy of a country with Latin, the maximum will be in Italy and the minimum in Scandinavia, with England and Germany somewhere midway.

The Latin barometer, so to speak, steadily sinks as it moves northward.

The lack of any reference to the vigorous movement for reform associated in England with the names of A. J. Ellis and Henry Sweet, in Norway with Johan Storm, and in Germany with Perthes and Victor was as striking as the marked tendency to keep the education of boys and girls apart and to refuse admittance to optional subjects.

A page sufficed for M. Darboux's article on mathematics. The right method in arithmetic, a few rules and simple sums, gradually followed by reasoning and if possible the complete theory, he thought fairly settled; is it desirable to add a little algebra? For geometry might not the limit be put at the didactic teaching of the rules for the area and volume of the regular bodies, while pointing out their application to architecture and the fine arts? The teaching of cosmography is admittedly difficult. In France two stages are kept strictly apart, the first displaying the planets in their orbits round the sun, the comets, the stars, and the nebulae, and the second dealing with more difficult points, such as eclipses, the calendar, the inequality of day and night.

Are we to teach physical science to girls, asks M. E. Perrier, in his article, to develop the mind, or to give a simple résumé of every-day

*A possible method of doing this in the case of English will be found in the *Educational Times* (London) of January, 1890.

knowledge, useful in housekeeping? Can we combine both points of view by presenting scientific facts of every-day life in their scientific connection? The teaching must of course be experimental, but how far should the study of physics and chemistry be carried? Ought hygiene to be separated from them? The narrowest programme would admit some organic chemistry. Should fermentations and the morbid action of bacteria be the limit? Cuvier saw in the natural sciences an admirable means of mental discipline in order. Has not the prejudice against classification been carried too far, especially since the method of considering an animal in his own environment has transformed the old categories? Although the study of living animals might be made to have a philosophic value, physiology must take the first place in the education of girls, as it gives a reason for the rules of hygiene.

Our deliberations began with a general question: Ought we to teach girls everything that they can learn? Since they can learn the same subjects as their brothers ought they to receive the same education in a mixed school or would it be better to make a special curriculum for the girls? Our section agreed in desiring that no barrier should be raised against the entrance of women to the university. Let those whose tasks and abilities lead them to higher studies take their degrees; we can trust to their good sense the use they will make of them.

Only a small number, however, will want this higher education. The majority leave school about 16 and return home, where other duties devolve upon them. This consideration, joined to the question of health, of physical and moral delicacy, led the section to deliberate upon the proper method of teaching science to the latter class. How could their minds be made firm and clear? How could they become stronger and more intelligent and fit to fulfill their proper rôle in society?

From mathematics we may hope to gain a discipline for the mind and an initiation into method. Algebra, by simplifying the difficult processes of arithmetic, raises the teaching from the particular to the general and lends precision to the other sciences. Geometry accustoms us to see and to reason accurately, besides being the link between art and the abstract sciences; cosmography brings light into geographical work and interests the pupil in the cosmic order of the universe.

These three sciences must find a place in our curriculum and we accepted M. Darboux's propositions.

The inductive and experimental method should be followed, and all the various branches of physical science, split up though they are at present, should be introduced. The limit will be reached when the results can not be foreseen or verified; all mathematical demonstrations will be avoided and all theories beyond the grasp of young minds will be carefully excluded. The teaching must be in every case experimental. The favorite science among girls is natural history. The study of animals and plants excites their curiosity and develops their powers of

observation, while the knowledge of the physical constitution of man leads up to that of his mind and heart. Hygiene is one application of physiological studies, and we ask the Congress to approve of our resolution that hygiene should always be connected with the natural sciences of which it is an application.

The general assembly practically accepted the articles of M. Darboux and M. Perrier. The final resolutions were:

I. It is desirable to teach algebra to girls in secondary schools in order to raise the standard of the teaching they receive; arithmetic, especially, is simplified by the study of algebra. Continued repetition is necessary; at first the rules and simple problems must be given, theories and processes of reasoning being gradually introduced.

II. Geometry ought to be taught as a mental discipline.

III. In the elementary classes the teaching of cosmography ought to be mainly picturesque and in the higher mainly mathematical.

IV. Physical science. The teaching ought to be general and experimental, covering all the various branches.

V. Chemistry. The teaching ought to be experimental and elementary.

VI. Natural history. Only the fundamental elements ought to be taught and experimentally as far as possible.

On the place of economic and social science in higher education.

A luminous article on the fifth question was due to M. E. Boutmy, the director of the *École libre des sciences politiques*, and a representative in the high council of instruction free from state control. To what faculty does sociology—to use a shorter word—belong? Political economy became scientific at the hands of Adam Smith, who was professor of moral philosophy. Considering life as made up of sympathy and interest, and holding himself quit of the former in his "Theory of Moral Sentiments," he limited his "Wealth of Nations" to the latter. Treated after his death by the deductive method the science grew "dismal." At present deduction is suspect and the vast number of facts accumulated in a century of laborious work tended to bring the science out of the psychologic stage into the category of observation. Indeed, the flourishing school started in Germany by L. Brentano holds that the time is not ripe yet for generalization; provisionally political economy must be put out to nurse with empiricism.

Limited to an investigation of the useful, economic science will recognize that its conclusions have only a restricted value, complementary to a psychology embracing the whole man. Checked by history and geography the abstract laws of the science will need modification for different countries, while statistics and demography, its latest auxiliaries, will keep it in touch with mathematics and biology.

With law, except on its commercial and administrative side, together with the modern development of state socialism, economic science has

no fruitful relation. The founders of economic science shut it up in a sort of peninsula, attached to the mainland of moral philosophy, but tendencies due chiefly to Comte have brought more into light the connection of economic with social science, whose chief auxiliary is history in its largest sense.

If sociology can not practically as things are have a faculty to itself, where can it find a home? In Germany, the extraordinary plasticity of the university system as embodied in the *Privatdocenten*, renders the introduction of new and budding sciences facile, while leaving them free to choose their most natural resting place. In other countries the strict organization of studies renders the action of government necessary to introduce anything fresh and original. Considerations of practical expediency, rather than of science, determine where the old will accept the new.

Among Germanic races there seems to be an inherent fundamental tendency to treat all questions from the historic standpoint; men and things are in an incessant evolution; no final statement comprising unchangeable rules is possible.

With Latin races the logical instinct is more imperious; their interest in a subject is rather to establish the coherency and connection of its different parts than to trace its past development. Like artists, they flatter themselves that they can fix the expression of truth once and for all.

A distinction real, though vanishing, exists between nations with a written law and nations with a historic law.

In Germany, and still more in America, the tendency of sociology has been to group itself with history; in France, Italy, and Spain, with law.*

M. G. Blondel read the report to the general assembly on August 10.

In order to facilitate the discussion of the many points raised in M. Boutmy's article, the president of the section, M. Bufnoir, divided the general question for discussion under four heads:

(1) Is there anywhere an organized teaching of the whole range of the economic and social sciences? How much does this teaching include? What sanction has this teaching? What preliminary tests are imposed on students who wish to follow this teaching?

(2) Is it desirable to recommend the organization of such teaching? How much ought it to include? What sanction will it have? What preliminary tests ought to be imposed?

(3) Can this teaching be put under any of the existing studies, either by being attached to some definite faculty or by spreading it among various faculties?

(4) In any case is it not desirable to recommend in the faculty of law the development of the study of the various branches of political econ-

*The above résumé is much shorter than M. Boutmy's article, which well deserves an attentive study. It was published with the other articles by the *Imprimerie Nationale*.

omy? Might not this development be usefully combined with the teaching of various branches of common law in such a way as to offer a body of subjects adapted to the needs of young men entering on careers in the government offices, diplomatic or consular service, or political life?

The section immediately stated its opinion that social science was not taught anywhere with the fullness it deserved.

Some interesting information was given us by the Marquis Alfieri, of the school founded by him in Florence. The teaching comprises seventeen subjects, of which the majority come under law; being attached to a school of notaries, the scientific side has been rather sacrificed to the practical. The students belong to the well-to-do classes and wish to prepare themselves for public appointments or political life. The diploma granted by the Florence school opens the way to many careers, and more especially to the diplomatic service. The students must be bachelors, and they are readily received in many occupations. At Bologna, as we were informed by M. Gaudenzi, a similar school exists, but it is intimately connected with the university. The only three courses of lectures given are simply complementary to those in the faculty of law. M. de Medvezky stated that in Germany the lectures came under philosophy as a rule, and in Austria-Hungary under law. The students belong very often to several faculties. A considerable knowledge is looked on as the necessary base for these studies, which are crowned by a special degree in social science. At Berlin, according to M. Georges Hulin, the majority of the students work without any interested motive.

From M. Van der Rest we learned that Brussels has recently made a plan for teaching social science by inviting the coöperation of the professors in the various faculties.

For the first three headings the section was not able to formulate anything more precise than M. Dreyfus-Brisac's motion: "It is desirable in higher education to pay greater attention than has been done in the past to economic and political science." The difficulty of arriving at a precise statement was increased by the phrase social science, which may be made to include everything that bears on the historical development or the study of the constitution of human society. M. Van der Rest protested strongly against M. Boutmy's opinion that political economy had no intimate and fruitful connection with law.

M. Urechia informed us that an attempt had recently been made in Roumania to found a school for social science; no diploma but a leaving certificate was granted. The students were preferred by the Government for public posts.

Opinions varied as to the best authority under which to place the study. Some were dubious of university teaching and preferred special schools, where a thoroughly practical instruction could be given, while others thought it would be better if the universities enlarged their borders to admit the new studies. They are too numerous and

varied to come under the faculty of law, and yet until the different portions of social science are more closely solidified it seems undesirable to increase the number of faculties.

The Congress felt itself still less capable than the specialists of formulating any exact scheme and contented itself with accepting M. Dreyfus-Brisac's motion:

"It is desirable in higher education to pay greater attention than has been done in the past to economic and social science."

The work of the Congress summed up.—The labors of the Congress were summed up by M. Gréard, in a speech frequently interrupted by applause:

The session of the Congress has been long and laborious; I hope it will be fruitful. On all the questions brought under your notice, there has been an important exchange of opinion. In some cases you have come to resolutions fit for immediate application. The secondary education of girls has not occupied you least, and with justice; is not the question the most delicate and the latest born? Two points stand out from your discussions; the first is, that the education of girls ought not to be an artificial veneer, for them no less than for the boys the proper aim is the acquisition of a certain amount of well digested knowledge and the training of the mind; the second is that though assistance should not be refused to women capable of raising themselves above the ordinary level, secondary education, being intended for the average mind, ought to be regulated according to the conditions of time, health, social position, and ability, common to the majority, and that it ought to aim at preparing girls for family life of which they are destined to become the moral support and attraction.

Taking into account the mass of knowledge heaped up in the programmes of all countries, and the impossibility of making everybody learn everything in the same uniform and encyclopedic manner, you have recognized the need of diversifying the types of secondary schools. You have from the first proclaimed the imperative need of maintaining and strengthening the type founded on the knowledge of the classics, a study that has long been the cradle of thinking humanity, and is still to-day a bond between minds of the first rank. But by the side of this purely classical education, you have thought it possible for those who have to reserve a part of their time and powers for other subjects to establish another type resting on an adequate knowledge of one ancient language, the one nearest to us in grammar and ideas; I mean Latin. Considering, however, that our modern civilization has so many needs and interests to satisfy, you have agreed that there is room for another type in which the base should be the study of our own tongue, coupled with that of modern languages; this is what is described as a modern education; it may be called modern and real if you will, the word matters little when it is agreed that for it, as for the other two, the aim is a disinterested culture of the mind.

By the way you have considered the question of the proper method for teaching modern languages; the important point with some was to acquire a practical control over the language; others insisted on the advantage for young people of reading great works of a foreign literature, firmly convinced that although a modern language ought to be spoken at first, yet one not spoken contributed to another commerce none the less precious, the commerce with the feelings and thoughts of those who have left in their works their best.

The baccalauréat gave rise to contradictory arguments. You readily agreed on the necessity for some sanction to secondary education, a sanction coming naturally at the end of regular class work, in which the marks obtained during the school life should count. The difficulties surrounding the composition of the jury called

to grant this sanction made you hesitate in an expression of opinion. It was clear, however, that those juries, made independently of the ordinary class masters, need amendment in order to obtain a more satisfactory direction of studies and a greater surety in the result of the examination.

For higher education the questions proposed were of great importance. The Congress has made but a sort of preliminary investigation on the place of sociology. Your ideas and plans of organization will be valuable to those who are genuinely interested in the moral future of the world.

It was easier to come to conclusions in the examination of the international equivalence of degrees. Leaving on one side the application of the degrees to the practical exercise of a profession, a matter of interest to the State; you have liberally and wisely affirmed the desirability in the realm of pure science of doing away with useless and harmful barriers, without trenching on the authority necessary to great academic bodies, intrusted with the charge of higher education; you have opened the way to intercourse, communication and reciprocal penetration to the great benefit of science and the fraternal feelings which she awakes and sustains.

Had your labors ended but in this resolution they would have been enough to characterize and to justify this Congress. There are still disappointed men who ask, with a touch of scepticism, "What is the use of a congress? Would not an exchange of papers, where everybody could find what he wanted, be enough?" Papers certainly play an important part in our studies; there is no use in denying this; they pave the way, they clear up and complete discussions. But are the living communications, that lend warmth, power, all the charms of the spoken word to thought, nothing? Conversations such as we have had, are of necessity somewhat hurried through the limit of time, and they can not have the precision of a book; and although I should not deny that our reports contain certain inaccuracies and contradictions in details, the important thing to do was to lay down the principles that are the light and soul of things, and this you have done. But neither papers, nor books, I affirm, could have evoked the sympathy that the discussion has caused among those whom liberal views have brought together.

A common thought has more than once shown itself clearly in your discussions; the resolutions you have taken ought to be communicated to all the bodies they affect; our study ought to be followed up and brought to a successful issue by the perseverance of all countries; in short, the international bond that you have created ought to be maintained, enlarged, and strengthened.

This wish you have left with us. It will not be our fault if it is not realized.

The electric stream of sympathy set going by the President was in no whit diminished by the foreign delegates, M. Laskowsky, Mr. Stanley, M. Basiadis, and Mme. Griseri, who thanked M. Gréard for the tact and fairness with which he had presided over the Congress, and, through him, they thanked France for her hospitality.

B.—THE EXHIBITION AND CONGRESSES ON SPECIAL SUBJECTS.

PART I.—THE EXHIBITION.

SECTION I.—PRELIMINARY.

The preliminaries for the exhibition relating to primary instruction were put in train by M. Berthelot; who, on April 4, 1887, appointed a commission of eighty-nine members, with MM. Gréard and F. Buisson at its head. The commission sent a report to the Government on June 27, based on the labors of six committees, who entered fully into the necessary details. This report was followed on July 31 by a general instruction from M. E. Spuller, in which emphasis was laid on the need of

a complete and faithful presentation of public primary instruction. An offer of free space was made to all those who, participating in the great work of national education, were desirous of exhibiting under the auspices of the minister.

Of the nine great groups into which the whole Exhibition was divided, education, occupying classes 67 and 68, was included with the liberal arts under group 2. In the second volume of the General Official Catalogue the exhibits were arranged in each class, first under countries and then under the names of the exhibitors, with, finally, the place in the Exhibition grounds, the word "Esplanade" often occurring wrongly in the place of "Palais" (des Arts Libéraux). The catalogue needed a great deal of study before it could be effectively used.

Primary instruction occupied class 6, and was divided into sections, each of the seven sections being arranged under three distinct heads: installation, method, results. Installation comprised plans of school buildings, furniture, and teaching apparatus; under method, specimens of copy and exercise books, registers of attendance, rewards, school societies, savings banks, games and discipline, visits and holiday resorts, books used in school; under results, specimens of the pupils' work. For the latter special pains were taken to avoid any abuse. Under no pretense were exercise books, drawings, or maps admitted that had been prepared with a special view to the exhibition. The obvious wisdom of this precaution was enhanced by the selection of work done, not by a selected few of the best scholars, but by the ordinary average child.

It is unnecessary to enter more fully into the rules and regulations laid down, as we shall find them translated into practice in the Exhibition. The elaborate sets of questions addressed to the various bodies of teachers, the shapes and sizes of the objects to be exhibited, and other matters of the highest value to future organizers, will be found in the thirty-eighth fascicule of the publications of the Musée Pédagogique: *L'Exposition scolaire de 1889*.*

Armed with this preliminary knowledge, we descend the slope of the Trocadero gardens; our delight in the delicate elegance of the Eiffel tower passes into amazement at its size and strength when we stand underneath. We ascend to get a clear view of the buildings, and we see the vast Machinery Building running parallel to the Seine and at right angles to the main axis of the Exhibition grounds. Another set of buildings, we learn from our guidebook, is devoted to the miscellaneous French groups, and two wings, one on the left for fine arts and the other on the right for the liberal arts, run nearly up to the tower, leaving the gardens in the center. Directly beneath us a motley group of buildings are dotted over the grass in the gayest confusion. Mexico finds herself a near neighbor to the Argentine Republic and a restaurant, while Chile can look into Venezuela or the Children's Palace. The Quai d'Orsay couples the Colonial Exhibition on the Esplanade des Invalides with the Champ de Mars. On the other side of the river the Trocadero, perched on its slight hill, seems to protect with its curving wings the Exhibition from the outer world. A request for a general catalogue produced eight volumes, but a few hours spent in examining them were well repaid. The first two groups, art and education, were devoted to intellectual labor; the others showed the mechanical processes needed to supply man's most primitive wants—a dwelling, clothes, and food.

Several days were needed merely to walk through the various galleries. Unlike earlier exhibitions, the arrangement was not by countries as a whole, but by subjects, an excellent change for purposes of international comparison—the relative strength and weakness in any section being at once obvious. The strength of Switzerland, for example, in machinery must have been a great surprise both to foreigners and to the Swiss. To obtain, however, a general idea of the resources of any particular country necessitated a great number of visits to very different quarters, accompanied by a fear that something was sure to be overlooked. A strong feeling

* A complete list of the fascicules will be found in Appendix II of this chapter, pp. 137-142.

of half-angry disappointment was inevitable as soon as it became clear that the official political boycott of the Government had been extended to the Exhibition. Surely it would have been enough for the ambassadors to have been absent from the various political fêtes. France did not refuse to send to London and Melbourne. From an educational point of view the absence of Germany was a heavy loss, especially for England, who has begun her educational reform so late and needs, above all, the awakening of a pedagogic sense.

Even in France the schools belonging to the various religious bodies were not represented. If the object was to weaken those who refuse to allow the school to be a weapon of sectarian propaganda, it failed utterly. Abstention did but help to throw into higher relief the logical and comprehensive grasp taken by the Government of the whole field of education from the cradle to the university. The honor of displaying the completest educational exhibition the world has yet seen belongs to a secular government with a secular programme. France and Switzerland alone made an adequate educational display, and in both the main weight was laid on primary and technical schools. With all these restrictions, however, there was enough for the most inveterate sight-seer, and for the student a month's work would hardly suffice for a single group.

Let us turn to the special subject in hand. We walk toward the wing of the liberal arts; we pass the colossal statue of Buddha placidly smiling on the crowd beneath, and mount the staircase with the reflection that the East sits and meditates while the West stands and works. A thousand objects challenge our attention, but we enter class 6 and find a long corridor parceled out into eight large rooms by partitions springing right and left from the walls. Down the center runs a series of glass cases. In spite of this liberal space M. Messin, to whom the task of organization fell, found that only a part of the objects sent by the various exhibitors could be shown. Handicraft is certainly the watchword of the day. All the walls in the first room were covered with work in wood and iron, sent by various higher primary schools and training colleges.

The programmes reach down to the maternal school and regulate the minutest details of procedure. The strongest opponent of such a method can hardly deny that the programmes afford good educational reading. For each of the three stages into which primary school life is divided there is a separate programme, and each is divided into the three rubrics of physical, intellectual, and moral.

SECTION II.—CITY OF PARIS.

Two large buildings at the bottom of the garden, between the luminous fountains and the central dome, were occupied by the city of Paris and the prefecture of the Seine. The sense of unity in this exhibition within an exhibition was a charming relief to the distracting wealth and variety outside. The large spirit in which the municipal council took up the question was sufficiently clear from the report presented by M. G. Gaufres (*Revue pédagogique*, February, 1889, p. 138). The first impulsion came mainly from M. Gréard's memoir, *L'enseignement primaire à Paris et dans le département de la Seine de 1867 à 1877*. M. Duplan's continuation, under the title *L'enseignement primaire public à Paris, 1877 à 1888*, is a perfect mine of information on all possible points of school organization. The establishments represented were the maternal schools, the elementary primary schools, the higher primary schools, and the professional schools.

In order to comply as soon as possible with the law making attendance compulsory, 16,252 places were temporarily provided for between September 1, 1882, and April 1, 1883, by the erection of forty-nine wooden schools.

These were gradually replaced by "school groups." These ought to contain under the same roof the necessary buildings for a maternal school, a boys' and a girls' school, a covered playground, a special room for drawing, one or two workshops, a sewing room, porter's lodge, kitchen, a small room for the library, another for the weapons

of the school battalion, a master's room, and a reception room for the use of the head master.

All the books, pens, pencils, etc., are supplied gratuitously to the children by the city; the directors send up from time to time a list of what is wanted; the amount demanded must not exceed 4 francs per head. In 1871 a large *Magasin scolaire de la ville de Paris* was started in the boulevard Henri IV, through the initiative of M. Gréard.

A beginning of an attempt to solve the difficult question of comparing one year with another was made by a table of statistics drawn up in accordance with some very detailed instructions. In the lowest grade of writing, spelling, and arithmetic the best boys obtained 55 as against the girls' 49 per cent; in the second grade, on six subjects, the boys won 62 and the girls 58 per cent; in the higher grade, on eight subjects, the numbers were 81 and 75, respectively.

Public libraries.—The west pavilion near the Palais des arts libéraux was almost entirely given up to the school. As though to emphasize the fact that education must be carried on throughout life we first meet with an account of the public libraries in Paris. There are to be ultimately eighty of them in the whole city; fifty-seven are at present in working order, comprising twenty at the different *mairies*, and thirty-seven in communal schools. Books and pieces of music may be taken home for a fortnight; in 1888, although 1,277,436 loans were made, the losses only came to 4½ in 1,000. Besides these libraries for the general reader there are eight specially devoted to industrial art; of these the best known is the *Bibliothèque Forney*. To an annual income of 7,105 francs from M. Forney's bequest the city adds 5,600 francs. Such a collection of engravings, photographs, designs, and expensive art books has never before been within the reach of working men. In 1888 the eight libraries answered to 49,693 requests from readers. "The nation that teaches design to the mass of its people will be the leader in things that require taste and dexterity of hand," said Diderot long ago.*

Maternal schools.—A model of a maternal school, filled with the desks already described, contained specimens of the children's work. Some exercise books showed that the very first elements of knowledge were judiciously given; the comic drawings in them awoke confidence in the genuine realism of the exhibits. Among the books displayed we noticed the first part of M. Duplan's book; Koenig and Durand, "Jeux et travaux enfantins;" Delon, "Exercices et travaux pour les enfants." The 127 maternal schools contain 22,879 places for children of both sexes between the ages of 2 and 7. They are entirely in the hands of women, there being 123 heads and 307 assistants. The instruction includes the first elements of morals, knowledge of common things, drawing, writing, and reading, exercises in language; notions of natural history and geography, recitations, singing, and graduated gymnastic exercises.

A well-arranged gymnasium near showed, besides the usual pieces of apparatus, a set designed by M. Pichery to develop strength by working against a coiled spring.

Canteens.—Opposite the gymnasium was a *cantine scolaire*, such as can be found in every school group in Paris. Although the prime object of these is to improve the physical build of the children by supplying them with wholesome food, their value in securing regular attendance was an important factor in persuading the municipal council to vote on the proposition of M. Hérold, then préfet of the Seine, 480,000 francs to organize the service and to replace a number of private "tuck shops" kept by the school porters.

The children are provided beforehand with tickets with which they can buy portions of soup, vegetables, or meat for 5, 10, or 15 centimes. The children as a rule bring their own bread. Parents who are very poor can get these tickets from the school committee. In 1888 12,263 portions were given away and 15,965 were paid for. The corresponding numbers in 1886 were 8,717 and 15,086. In both cases the tickets handed

* See Les expositions de l'état, Tome II, p. 116.

in by the children are exactly the same. The funds are administered by the mayor and the committee of the school bursary.

Primary schools.—In the room devoted to the primary school the blackboard covered the whole length of one side. Thousands of exercise books with the masters' corrections were displayed. Some of them contained accounts of visits to interesting places; whenever words seemed to fail, a sketch or a diagram was at once employed, affording an indirect but powerful proof of the emphasis laid on drawing. Pen sketches are hardly desirable for beginners.

The tasks done in the books were of two sorts, daily and monthly, and did not seem to be too long; above all the exercises in grammar were kept well in check. The attempt to find some evidences of the effects of the teaching of morals did not lead to any decisive result.

A large glass case contained a school library; the number of books permitted to be put on the shelves reaches nearly 600, and the masters are looked after as well as the children. From the former were a large number of reports of pedagogic meetings, showing that peculiar intimacy of treatment found only among genuine workers.

The gendarmes, who turned me out into the grounds several times, seemed to be highly amused that any one could be so absorbed in reading exercise books as not to hear the 6 o'clock gun.

The instruction comprises morality and civics (if I may coin the word), reading, writing, the French language and the elements of its literature, geography, especially that of France; history down to the present time, especially that of France; elementary ideas on law and political economy; elementary natural science, physics, and mathematics; their applications to agriculture, hygiene, and industry; handicraft and the use of the tools employed in important trades; drawing, modeling, and music; gymnastics, with military exercises for the boys and needlework for the girls. The 191 schools for the boys contain 70,694 places; the 174 for the girls 60,509 places. Of the former, 17, called "infant schools," are limited to the elementary course (boys from 7 to 8) and are presided over by women. The total number of teachers, men and women, is 3,002.

The course of study for the higher primary schools comprises morality and civics, political economy, common law and commercial law, French language and literature, writing, history, geography (physical, political, administrative, etc., industrial, and commercial), modern languages, mathematics (including plane trigonometry and elementary solid geometry), bookkeeping, physics, chemistry, natural history, drawing, singing, gymnastics, and handicraft.

Paris now possesses five of these schools—Turgot, Colbert, Lavoisier, J-B Say, Arago—the instruction being gratuitous and obtained by public competition. Boarders (who have to pay) are taken only at the J-B Say school. The same sort of education is also given to the lower classes at the municipal Chaptal school. Three thousand seven hundred and ninety-three places are thus provided in all.

The Sophie-Germain school accommodates 384 girls. The boys showed work in wood and iron and the girls some elegant dresses. The room was full of bound notebooks. There was an air of reality about the essays. Three marks are given, one for the matter, another for the style, and the third for the "effort."

The increase of handicraft, which is begun at the age of 10, apparently had had no bad effect on the literature. In some of the books there were very good exercises in etymology. Groups of allied words were collected and their meanings discussed, or else the force of a prefix or a suffix was amply illustrated from the compounds. Undigested scraps of derivation borrowed from the etymological dictionary most in vogue were carefully avoided.

These schools are said to form an unbroken line with the primary school, and to afford an excellent preparation for those children who go afterwards to the training colleges or to art and trade schools, whereas the less clever help only to swell the overcrowded army of clerks.

Needlework, the natural basis of handicraft in girls' schools, was put on the official programme in 1867. The instruction is divided into three parts: The elementary stage takes an hour a week, and the children are taught marking and sewing, and they practice the simplest stitches. In the next stage two hours a week are given to the practical application of these stitches in mending; the girls learn to put on a three-cornered patch overcast. In the last stage they make button-holes, loops, eyelet-holes, and do running and felling. The mending comprises square pieces overcast, running and felling, gussets, darning and mending stockings; cutting out and making up have since been added.

Drawing.—The teaching of drawing takes precedence even of writing in the maternal schools and runs through the whole school system till it finds its fullest development in the professional schools.

At first the children learn to combine lines by means of lathes, folding and plaiting paper. These are then copied on a slate and then on paper ruled in small squares. Easy designs drawn by the mistress on the slate are copied in the same way.

In the primary elementary schools two lessons of an hour each are given till the children reach the upper division, when they begin model drawing from the east under specially certificated teachers. The two lessons are each now of two hours duration.

In the higher primary schools all the teachers are specially certificated. The lower programme is extended and augmented by the addition of geometrical drawing (architecture, machinery, tinting, descriptive geometry, theory of shadows, etc.). So far the teaching has been general and theoretic. In 1883 two schools were opened for its application to the art of designing. In the Germain-Pilon schools a firm theoretic base is given by teaching applied mathematics, drawing from the east and the life, decorative sculpture and painting, architectural design, the history of art and of ornament. The final completion is found in the Bernard-Palissy school where four workshops are devoted to developing skill in the four main industries in the district—pottery, decorative painting, sculpture, and upholstery. For adults sixty-eight evening classes, open every day from 8 to 10, give instruction from geometrical drawing to sculpture. For women the city of Paris subsidizes sixteen private schools on condition that they receive a certain number of students who do not pay fees.

Under the heading of "Design and modeling" there was a fine exhibition of works of art with all the French "go" in them. The Parisians seemed determined to retain their unique reputation for art taken in its widest possible sense. No less than sixty-eight special classes for adults have been started recently for teaching design.

Midway between the higher primary and the apprenticeship school stands the work done at the communal school in the rue Tournefort, where, in 1873, M. Salicis opened the first workshop for the use of children. His system was purely pedagogic. We borrow some interesting details from his paper on the teaching of handicraft in the fourth volume of the *Monographies pédagogiques*. Condorcet demanded the introduction of design and handicraft into boys' schools, as well as one woman teacher to every town of 1,500 inhabitants. His contemporaries nicknamed his plan of educational reform Utopia. Nothing of much importance was done till Jules Ferry obtained, in March, 1882, a law making handicraft compulsory in primary schools; no money, however, was given to carry out the law. In London, recently, many meetings have been held and enormous sums of money asked for, to start polytechnics; in all these speeches there is never a word on the teacher. M. Ferry was more sagacious; at the suggestion of M. Buisson he sent M. Salicis to study handicraft in Germany and Scandinavia. On his return a post of general inspector of handicraft was made for him and he opened a special school for training teachers in the rue Louis-Thuilleul. In two years 72 students were sent to the various training colleges with a certificate testifying to their capacity. Within six years handicraft was taught in more

than 12,650 schools. Since 1886 the subject has its place in every time table. In the higher classes the children receive two lessons a week, each lasting about three hours.

According to the official statistics Paris, in 1888, had ninety-nine workshops, with places for 16,562 pupils.

Although the labors connected with the exhibition were a severe strain on a man more than 70 years old, M. Salicis presided over the section for technical instruction at the primary congress as well as over the congress for commercial education. On December 1 France was so unfortunate as to lose him. The brilliant fruit of his lifelong devotion must have been a profound solace to his closing days.

Since the school in the rue Tournefort is the best appointed of its kind, a few words on the curriculum may be of use. All the children learn design and modeling and they are all admitted to the workshops; in the lower classes two hours a week are spent in modeling and two in working on wood and iron alternately; in the middle classes only one hour a week is spent in the workshop; in the higher classes the children are at school from 8 to 6. They are in the workshop three hours a day and work alternately at the bench, the lathe, and the forge, at fitting, modeling, molding, and carving in wood and stone. The workmen who help to teach are selected by competition and they are placed under a pedagogically trained master, whose duty it is to give a theoretic lesson of a quarter of an hour and to see that the designs are properly drawn before the children proceed to make anything. Further details may be found in M. Duplan's book and in *Le travail manuel à l'école de la rue Tournefort*, by MM. Laubier and Bougeret.

The Diderot school makes all its students work both in wood and iron during the first year; a choice of one or the other must then be made and the student proceeds to actual work, without, however, subordinating theory to practice. The exhibits were arranged in the form of a pyramid and aroused a wish to see what the masters were capable of if the students could turn out such admirable work. On January 1, 1889, the school had 313 students.

During the three-year course in both these schools general education receives the most careful attention; regular lessons are given in modern languages, mathematics, physics, chemistry, drawing, the history of art, etc. In the municipal school for chemistry and physics as applied to industry the aim is purely practical. During the first year the students follow a common course in mathematics, physics, and chemistry.

During the second year, when they are divided into physicists and chemists, some time is spent every day in the laboratory in actual manipulations; during the last year these occupy nearly all the student's attention, the rest being given to one or two lectures a day.

Nor are the girls neglected; indeed they are better off, as they have five schools. Domestic economy, bookkeeping, modern languages, designing, cutting out and making up, ironing, stay-making, feather-dressing, painting on china, are all provided for.

Girls with a certificate of primary instruction are admitted to a competitive entrance examination between the ages of 13 and 15. The course lasts three years and comprises a common theoretic base, together with special training in any particular workshop the girls may choose to select. The general education follows the lines of higher primary education.

The school in the rue Fondary opens at 8:30 and closes at 5:30. An hour is given to dinner and half an hour to gymnastics. General education takes three and technical four and a half hours. The girls take a week in turn in looking after the housekeeping.

Some of the apparatus for teaching the blind, the deaf, and dumb seemed rather out of place here. M. Grosselin's method for teaching the deaf to speak was practically exemplified at the *École modèle*, of which we shall have to speak later on. The

method consists, essentially, in helping lip-reading by the hands. To tell what a person is saying purely by watching the lips is like deciphering very bad writing. The *Association sténographique unitaire*, for the propagation of the Prévost-Delaunay method, claims twenty-six out of forty-seven reporters for the senate. The hygienic table shown by A. Feret, in which the desk could be raised to follow a child's growth from the age of 5, seemed excellently adapted for its purpose. The change from sitting to standing is appreciated by students as well as children.

The second room was mainly occupied by the exhibits from several training colleges. The woodwork from Auxerre and Grenoble was very elegant, while that from Toulouse was accompanied by the geometrical drawing from which the object had been made.

The extra course in a primary school at Creil merits a special notice. Handicraft is taught in it under the direction of the head engineer of a branch factory in the workshop given to the school by the Paris firm of Geneste, Herscher & Co.

The disease of external examinations seems to be even worse in France than in England, to judge by the number of publications specially designed to "cram" students for some certificate. More than a hundred new journals have been started during the last ten years; if we had a phonograph capable of reading the detailed lessons already made there would be no need for a living teacher!

Die Presse is not unknown in Germany, but the examination within the school walls and the large weight laid on the *viva voce* have saved her from the alarming proportions assumed in France and England by the examination exploiter.

The two normal colleges belonging to the department of the Seine, under the direction of M. Lenient and Mlle. Ferrand, respectively, are represented in the third room, although the main part of their exhibits will be found in one of the pavilions of the city of Paris; these training colleges are probably the best in France. The men showed a programme for handicraft in all its stages and a capital set of roughly rigged up apparatus for science-teaching. When all our schools have workshops, the masters will be able to make a great many simple instruments to the obvious improvement of their work in class. Another excellent idea was to make models of the apparatus employed in some classic experiment when it was too elaborate and complicated to be repeated before the children. The pupil mistresses had sent a large number of things, daintily arranged in a glass case, for imitation by very young children.

Not less interesting was the exhibit of handicraft from the town of Lille, in which seven schools are already provided with large and airy workshops.

A great moral advantage over the old apprenticeship system we may reasonably expect from such schools. The tricks of the trade and shoddy will become increasingly impossible with an élite of workers trained on a scientific basis.

In the Braille School for the Blind the ingenious maps and globes in which the outlines of the countries were marked with strips of leather and the towns with different sized brass-headed pins at once attracted attention. Most of them were due to the inventiveness of M. de la Sizeranne. Although the French do not seem to care for mixed schools they have at least one good one at Cempuis, where M. Robins directs the establishment named after Prévost for orphan boys and girls.

Training colleges.—The exhibits of the two leading training colleges at Paris, one for women, under Mlle. Ferrand, in the boulevard des Batignolles, and the other for men, at Auteuil, under M. Lenient, were somewhat crowded together in a small room. Two memoirs on their history and organization, together with numerous photographs, lent life to the exhibits. A complete set of notes for three years of the student who, on entering, was twenty-eighth only out of forty and tenth finally, gave a good insight into method.

An interesting album of instructive visits and vacation trips, enlivened by numerous sketches, was worthily capped by a large relief map of Mont Blanc, the fruit of a holiday tramp. On leaving the training college students carry away with them a

set of apparatus made by themselves and sufficient for teaching elementary physics and natural science.

Auteuil, with the aid of sardine and pepper boxes, etc., and such cheap material, sent 40 pieces. The students are taught collectively to make chemical experiments, while extra time is given them after the lesson to try any particular experiment again by themselves.

From the photographs it seemed, as is often the case in Germany, that gymnastic exercises were taken in linen shirts. Surely flannel is the only wear.

In England it is considered sufficient to get the "old boys" to meet once a year to dine together; but the past pupils of Auteuil have formed themselves into a "friendly and pedagogic society," and a bulletin, shown by the side of M. Lenient's notice, gave a clear account of the professional activity of its various members, who have taken high places in primary education.

About thirty dissections and preparations with sketches for teaching zoölogy were also sent. In many training colleges the teaching of this subject confused the future schoolmaster with a possible professor. Undue attention was given to the lower animals, while many subjects were treated that should belong to the intimacy of the laboratory.

Although the work sent by the pupil-mistresses of the training colleges in the rue Batignolles was somewhat overshadowed by the exhibition from Auteuil, a careful examination soon made it evident that the women received as good a pedagogic instruction as the men.

The notes of lessons to be given in the practicing schools were very carefully drawn up and excellently supplemented by the graceful objects exposed on the screens, consisting of cardboard work cut out and glued, work in paper, wool, silk, and straw; lathwork, modeling in wax or clay, cutting out, weaving, plaiting, etc.

Do the students make any apparatus for teaching science?

The number of ladies around the robes and dresses exhibited made it impossible for a member of "the less pedagogic sex" to obtain a view.

The other building near the Palais des Beaux Arts contained under "architecture" the plans of a school group in the rue Camon, and also of the Auteuil training college, the Lycée Voltaire and the École Arago. Two models were made of the medical practicing school as well as of the new Sorbonne, the latter being supplemented by a huge plan occupying the whole of one wall.

Two rooms were devoted to plans of Paris at different periods, one of them showing the 299 school buildings divided among the 20 arrondissements in 1889 seemed to leave no room for other public edifices.

Up to this point there had been no lack of exercise and note books due to children and masters alike. By their number they formed the feature of the exhibition. There were thousands of them, the great majority being sent by the primary schools. From Ciré the whole set in all three divisions of the schools from 1883 to 1888 had been sent. The handicraft will doubtless improve matters, but the amount written still seems too great; the less children have to do by artificial light the better.

The official instructions against the admission of detached examples for show had been carefully carried out; the bound volumes of the exercise books made it possible to trace a child's work through all his subjects. The tasks were of two sorts, daily and monthly. In the latter the child is supposed to be left to his own devices, but the master's direct influence was pretty plain in a good many. To see the master's corrections and criticisms in red ink systematically carried out was a new feature in an exhibition. They ought to afford the central authorities a ready control over the intrusion into the school of matters fit only for the training colleges. Examiners in England who ask a child of 10 to define porosity are happily becoming rarer, but there is still much to be done in making the line between scholarship and teaching sharp and clear.

The writing was good throughout, as a rule. The upright round supersedes the

angular formation of letters. The master writes a model on the black card, and this is copied once. The old disease of treating grammar as a thing apart from a text seemed still to be very common: To throw overboard the traditional Latin grammar, representing nothing better than the scientific level of the fourth and the eleventh centuries, as well as the deep vice of the Renaissance pedagogy, in which possible future use quite overshadowed any consideration of the child's psychologic state, is a very hard matter. Until we cease to try to put modern isolating languages like French and English into the synthetic straight jacket of Latin, and depose the subject taught in favor of the child as the center of education, with the consequent recognition of the skill of the teacher as superior to the erudition of the scholar, our progress is hardly likely to be fruitful.

The map-drawing, as far as I saw, was bold and effective. The main object of impressing the features of country on the mind was kept well in view. If neatness and prettiness are ranked too highly the exercise becomes a drawing lesson. The science looked too scientific. Do we ever learn any subject in its logical sequence? The first step is to win the child for the subject by linking on and expanding the old into the new with an endless diversity of treatment. The exercise books, however, gave the impression of rigid adherence to a fixed programme; all the boys and girls of the same age seem to possess the same amount of knowledge, obtained in the same way.

Text-books—The child vs. method.—Several of the small books on counting were so far subdivided as to give the exact lesson for each day. Since the fundamental tendency of an administrative department is to settle every detail, while modern science teaches us to see in differentiation the mark of advanced development, a few remarks on this subject may be intercalated here. Whether, as in America, a strict guard is kept on the method, or, as in England, the fate of the school depends on the so-called results in an attempt to achieve the impossible, the control must tend to become the dead hand, chilling enthusiasm and initiative. Surely the only solution is to take every possible care in the selection of the teacher and then to leave him a free hand within certain loosely defined limits. How delighted children are to do more than is expected of them! Shall the teacher be robbed of the same delight? To settle the text-book and the smallest details of method is to take the backbone out of the teacher. The origin of coördinates in the school is the child, and not the method.

Surely all practical improvements of permanent value come in the stress of teaching when the child is trying to explain his difficulty and his master is using all the powers of his sympathetic imagination to see where the difficulty lies. This varies from child to child and constitutes a heavy strain on all the powers of the teacher, but then the variety is infinite and the pleasure in the gradual perfection of artistic skill inexhaustible. To settle everything beforehand is to lower the teacher to the cattle drover, who simply has to see that all his animals follow the same beaten track.

Again, if a boy comes into a chemistry class with his face full of curiosity, not untouched with a remote hope of being able to pose the master, and says, "Please, sir, in the almanac this morning, the sun rose at 8 and set at 4:21; why wasn't 12 o'clock exactly in the middle?" is he to be silenced for fear of not getting through the daily dole of chemistry, or will the teacher, considering, like the congress, a "general and disinterested culture" as the chief aim of his labors, take the question *sur le rif* and give his class a short lesson on astronomy, and see that his questioner reads up within a month the references given him to some manual, until the matter is quite clear?

What Guizot said of the child we may apply to the teacher: *Faites le fort, et laissez le libre.*

SECTION III.—STATISTICS.

The fourth room was devoted to school museums, the objects being collected by the students of the training colleges. The subjects chosen were geology, entomology, and agriculture. Botany was represented by cases of artificial flowers sent by

Mlle. M. Fortier and by the firm of Hachette. This collection is officially recognized by the city of Paris and the minister. The few life-size models of animals, due to M. G. Philippon, awoke a desire to see the whole set. Chemistry was well represented by the *Société centrale de produits chimiques*.

A remarkably complete collection, due to M. Froville, a teacher at Épinay-sur-Orge, attracted general attention. Besides the usual apparatus for object lessons there were models of prehistoric monuments, dolmens, tumuli, cromlechs, etc.

The exhibits coming immediately from the minister of public instruction occupied the center room and opened out on the gallery running round the first floor of the palace. Four large volumes gave the *Statistique de l'enseignement primaire*. These useful reports have been drawn up by M. Levasseur and the other twenty-five members of the statistical commission appointed in March, 1876. The first volume, published in 1878, gave the statistics, for 1876-'77; the second, in 1880, contained a valuable summary of previous statistics, stretching over the period from 1829 to 1877; the other two cover five years each (1876-77, 1881-82, 1886-87) and are so timed with the census that the number of children to be taught can be compared with the number at school. The chief educational materials are supplied by the various inspectors and the financial by the préfets.

The fourth volume is peculiarly interesting, as all the fundamental laws except the one for the regulation of salaries fall within the period treated. For those who do not know what rich mines of information official statistics contain, a large screen sent by the minister showed the progress of half a century in primary instruction in France and Algeria. Here are the figures:

1877.			1887.		
Private....	18, 023 }	52, 779 schools	13, 613 }	81, 130	
Public....	34, 756 }		67, 517 }		
Private....	21, 270 }	59, 735 teachers	39, 886 }	138, 655	
Public....	38, 465 }		98, 769 }		
Private....	643, 580 }	2, 690, 035 children	1, 091, 810 }	5, 596, 919	
Public....	2, 046, 455 }		4, 505, 109 }		

The number of conscripts who could read and write rose in the same time from 55.3 to 89.9 per cent; in the Department of the Seine to 97.7.

The enormous expenditure necessary to produce these phenomenal results may be studied in detail in an article by M. Turlin, "*Organisation financière et budget de l'enseignement primaire*" (Monographies pédagogiques, Vol. I, pp. 553-613). The main figures are given by M. F. Buisson: "*L'instruction primaire en France, de 1789 à 1889*," to be found either in Jost's "*Annuaire de l'enseignement primaire*" (1889, pp. 277-295), or in the "*Revue pédagogique*" (Vol. XIV, pp. 9-22). In 1887, close on 173,000,000 francs were spent, of which, speaking roughly, the state contributed 85,000,000, the departments, 18,000,000, and the communes, 17,000,000.

Under the First Empire the amount devoted to primary education by the state was 4,250 francs; with the Restoration this rose to 50,000 francs—at the same time the royal colleges received 1,775,000 francs, while the clergy had 32,000,000. By 1869 this had grown to 9,500,000, and by 1879 to 25,000,000. M. Buisson estimates the total expenditure for 1889 at 200,800,000 francs, the share of the state being 98,000,000. To this must be added the amount spent on school buildings; a law proposed in 1878 by M. Bardoux to establish a bursary for this object was unanimously accepted both by the Senate and the Chamber. Between June 1, 1878, and December 31, 1887, nearly 528,000,000 have been spent in repairing and adapting old buildings or in erecting new ones. The charge of extravagance in building "school palaces" was crushingly met in the Chamber by the minister of the interior, M. C. Floquet, on December 28, 1888. (See "*Revue pédagogique*," Vol. XIV, pp. 1-8.)

As though to put the coping stone to their edifice, the government, just a fortnight before the educational congress began, passed the law of July 19, 1889, by which the relative share of expense to be borne by state, department, and commune was

settled, while the pay of the teacher was raised and he was at last freed from the tutelage of other professions, since his superiors very nearly all come from his own class.*

For the teacher the average number of children has dropped from 45 to 40. In 1837 the number of women engaged in primary schools was about half that of the men. Since 1863 a steady majority of 10,000 over the men has been maintained. The four sources of income, the state, the department, the commune, and school fees, show some instructive variations. They all reached a low point in 1867; after that the state rises without a single drop. The departments and communes run fairly parallel. In 1880 they both begin a steep decline till 1882 and then gently rise. The line for the school fees runs along the bottom of the diagram and suddenly ceases in 1881. At their decease the fees supplied about 9,000,000 in a total of 87,000,000.

To render the account complete the shelves contained the reports on the parliamentary debates over the new laws as well as the *Bulletin administratif*, which gave the various orders necessary to carry them out. Complementary to this, the political side, so to speak, of education was the admirable exhibit of the *Musée pédagogique*. A small deal box for the post was eloquent as to the use made of the circulating library. Besides the volumes of the *Revue pédagogique* the glasses contained a large number of short and readable monographs on nearly every subject connected with primary education. There are two series, the first covered in buff and the second in green paper, the latter containing single studies out of the six volumes of the *Recueil des monographies pédagogiques publiées à l'occasion de l'exposition universelle*,† a unique conspectus of education; statistics, administration, history, method are all treated and treated well. What a contrast to the modest publications for the exhibitions of 1867 and 1878! M. Buisson's *Dictionnaire de pédagogie et d'instruction primaire* found a fitting place beside the official publication; it has played a large part in the development of sound pedagogic opinions. A commission for *Imagerie scolaire* showed a bound volume of *bons points*; some of the best were shown on a screen. The French seem determined that everything passing into the child's hands shall be beautiful. One sheet published by Goupil contained the portraits of a number of the leading men of a period, with an enumeration on the back of the chief dates in their lives.

Some of Fontaine's fables were fringed with delightfully funny pictures. Around the wall were ranged the plaster casts selected by a special commission for a school art museum. A screen gave a complete résumé of handicraft from the maternal schools to the training colleges, the material being collected from the exhibits of various establishments.

In the same room space had been hospitably found for six societies independent of the state.

SECTION IV.—PRIMARY SCHOOLS.

This room was mainly occupied by the maternal schools.‡ Children of both sexes may enter at 2 and stay till they are 6. It almost looks at times as if, in France, the poor need only to take the trouble of being born and weaned; the state is willing to do the rest. Since, however, on an average each family in France has but one child, reformers will see no fault in the educational system if it tends to raise that average.

For the school year 1886-87 there were 6,090 maternal schools, with 761,692 children in them. Of the 9,219 mistresses the 5,996 in the public schools cost the state

* The text of the law, with comments by M. F. Buisson, is given in the *Revue pédagogique*, Vol xv, pp. 257-306.

† See the Bibliography, pp. 137-142.

‡ *Les écoles maternelles*. Mlle. Matrat et Mlle. Kergomard, Monog. pédag., Vol. VI, pp. 261-308.

4,636,863 francs. The head mistress must have the certificate of pedagogic aptitude, and to train them a normal course was added in 1882 to the training college for women, and then, with the wonderful French logic, the Pape-Carpentier school was transformed into a higher training college to form teachers for these normal courses. The chief part of the exhibits belonged to the private *Société des écoles enfantines*. The "model school" looked delightfully cosy, as well as carefully constructed on sound hygienic principles. As the society tries to keep the children at school till they are 8, the normal course for the pupil teachers is divided into three sections. For each of these a screen was exhibited, with a fourth for work done according to the fancy of the child. This was supplemented by albums giving in detail the steps of each occupation. Color rightly comes as the very first, with the exercises in position. Many of the other exhibits were protected by a red curtain from the dust and—the public.

Here also were the exhibits from the national schools of Voiron and Armentières. These were founded in 1882 by the state, after the model of the agricultural school at Vierzon, which had been opened in 1880. Owing to their more technical nature, the exhibits were shown in class 5, belonging to the minister of commerce, to whom, with the minister of education, the schools are apportioned.* The two former are to contain a maternal school, a primary elementary school, and a higher primary school, through which a theoretical and technical education will be gradually given. The child enters at 4, and leaves at 15, either to begin work at once or to pass on into some establishment for secondary technical training. Manual work in wood and iron naturally occupies a large part of the programme.

From Armentières the exhibits showed what was done, whereas Voiron seemed more anxious to display its method, containing, among other things, accounts written by the pupils of visits to large manufactories.

Vierzon was not so agricultural as it might have been and very little was sent from the various *champs d'expérience*, some of which have been in existence for ten years.

The teaching of music, too, seems to have received small attention in the exhibition; at least I find I have next to nothing in my notes.

From the higher primary school at Grenoble came a remarkably fine display of manual work. Besides articles in wood and iron, there were others made from cement found in the neighborhood. Dyeing and electricity are also taught. This was probably the best set of juvenile work in the exhibition.

SECTION V.—TRAINING COLLEGE EXHIBITS.

The exhibits in the next room came mainly from thirty-two training colleges. They consisted of manual work in wood, clay and iron, with, of course, great attention to drawing. The power to sketch rapidly in chalk ought to be an "accomplishment" with every teacher. Each training college has a gymnasium.

From the higher training college at St. Cloud (see the "Training of Teachers" below) came a set of photographs showing the workshop and art room and a fine collection of busts, casts, and vases.

The path of a ray of light through a lens was made visible by means of pieces of strings passing through a piece of plaster. The geology of the district around the training college at Aix was shown by a map whose colors were repeated below on the boxes containing the actual specimens of the minerals, etc. There were several good examples of dressmaking from the professional schools, with photographs of the girls at work.

A large stand of books sent by the members of the *Société nationale des professeurs de Français en Angleterre* consisted almost entirely of text-books prepared for English examinations.

* *Écoles primaires supérieures, écoles d'apprentissage et écoles nationales professionnelles*, par MM. F. Martel et G. Ferrand. Monog. pédag., Vol. II, pp. 267-313.

But what are we to say of the serried rows of manuscript sent by the masters? The mere enumeration of the green-backed volumes occupies twelve pages of the official catalogue. The departments come in alphabetical order and the monographs are arranged in them under the headings Training College, Higher, Elementary, Primary, and Maternal Schools. The head swims at the thought of the vast amount of patient work necessary to bring together such a mass of detailed information. There is something at once sad and encouraging in the thought of the teachers of France in remote outlying districts as well as in the great towns carefully investigating the history, the geography, the scholastic condition of their district only to find their labors buried in some vast official receptacle; but then each man does his duty without thought of recognition or reward. The last shred of an ancient prejudice that the French are more given to frivolity than to work vanishes before the silent eloquence of these volumes. Coherency is given to the various monographs by the skeleton framework drawn up for the masters; one of the most complete is that used in the Aisne department, drawn up by the Laon Geographical Society. The mere enumeration of the headings would occupy more than a page of this report. What is the astronomical position of your commune, etc.? Does the population increase or diminish, etc.? Is there anything peculiar in the physical constitution of the inhabitants, their food, their longevity, character, morals, customs, games, etc.? Are there any Gaulish or Roman roads? Have inscriptions been found in them, etc.? Are the schools ecclesiastic or secular? When were they founded? How many pupils have they? And so on.

The department of Marne occupied three of the glass cases. Besides a description of his own school each teacher contributes an article on a pedagogic question, with a map of the commune and various plans of the school, a table indicating the educational condition of the conscripts, a time-table, a description of the methods and list of books used in the school.*

A typical selection from these monographs would form an interesting fascicule for the *Musée pédagogique*. From them a small knot of devoted students might write a history of education such as no country as yet possesses. The advantage of going through a mass of material is the acquirement of a sense of proportion. Our histories as a rule do not give any more accurate a picture than a tourist would obtain of a country in which he was suddenly shifted from one to another of those places he finds marked with a star in his Budeker.

The exhibition from the primary schools was well rounded off by the somewhat luxurious display sent from the three schools at St. Denis, Écouen, and Les Loges, belonging to the Legion of Honor, a society with more than 53,000 members. At these establishments 800 girls, the daughters of the poorer members, are boarded and educated gratuitously, while a small number who pay are also admitted, provided they are relatives of members.

Girls may enter from 9 to 11, but they must leave at 18. There are seven classes, each of a year's duration, with the *brevet élémentaire* for sanction. All those pupils who pass and show aptitude have another year in a higher course at St. Denis, where they work for the *brevet supérieur*. At Les Loges, however, those who in the early years show no particular aptitude for their studies are sent to the workshops for needlework and linen, where they receive the education of a primary school, the principal aim being to "inspire in the pupils a love of their fatherland and the virtues of domestic life." The girls are taught to make their own dresses and to keep the household linen, while lessons are given in baking, washing, keeping of accounts, etc. There are also *maitresses d'arts d'agrément*. The class to which a girl belongs is denoted by the color of the sash she wears; plain for the lower and parti-colored in the higher course at St. Denis.

At all the schools teaching is given in drawing, vocal music, and the piano. Extra time is devoted to them if after the third year a girl shows special aptitude.

* See the *Manuel général de l'instruction primaire*, 1889, p. 642.

The work sent to the exhibition was remarkable for finish and color. The three classes for professional work at Les Loges (*broderie, lingerie et confection*) were each represented by a screen; articles of female wear from the cradle to the ball-room and the marriage outfit were displayed on them. The other schools sent screens, fans, silk tapestry, water-color drawings, embroidery, etc.

The same room contained some highly colored life-sized figures of savages who seemed surprised at their surroundings. They had flowed over from the "Scientific Missions" of the Talisman and Travailleur.

SECTION VI.—SECONDARY EDUCATION.

An air of quiet and wealth at once marked the passage into the handsome oak paneled rooms* devoted to secondary education (Group II, class 7). A large number of books written by secondary teachers and handsomely bound was exhibited by the minister, but it was tantalizing to be allowed to read only the backs of them. A search for works on the Latin and Greek classics showed few results; indeed, to judge from the exhibits one would have said that secondary education had gone wholly over to science. A large amount of excellent school furniture and apparatus was shown, the chemical exhibit by the *Société centrale des produits chimiques* being, perhaps, the finest.

Gymnastics were prominently represented. They seemed to be a good deal connected with shooting societies. The model gun and the "war toys" for children, shown in the Esplanade des Invalides, throw a sad shadow over the other educational apparatus.

Although the note-books, so numerous in the primary section, had shrunk very considerably here, the *bulletin trimestriel* of each pupil testified to the existence of an enormous amount of note-taking. Life in school was made very vivid by a large number of plans, models, and photographs. In one model of a dormitory the beds had simply a sort of screen around them, the chief amount of space being devoted to the *passages desurveillance*. A photograph showed beds with the students in them. The Collège Sainte-Barbe, which can hold 1,200 boys, was most completely represented. The junior school at Fontenay-aux-Roses, for children from 6 to 12, must be a charming place.

A model of a capital desk for two was shown by O. Andrée, of Neuilly; the boys are separated by a box on the form containing a large number of books for reference.

The École Monge (founded by old pupils of the École polytechnique) and C. Muret showed excellent sets of models for teaching pure mathematics.

Music was far better represented here than in the primary department.

The impulse towards a reform of secondary education was given by a circular of J. Simon, issued on September 27, 1872, but its immediate effect was hindered by the state of politics.† A more fruitful period began when J. Ferry, in 1880, opened the high council to secondary teachers. By cutting down the amount of time spent on Latin exercises, by increasing the amount of instruction in French, science, and modern languages, and by postponing the commencement of Latin, so that children from the primary grade could carry on their development uninterruptedly, secondary education was brought into living relationship with the lower and higher grades.

* May I mention here that an operation familiar to travelers, which has succeeded very well in the rooms devoted to primary education, failed completely in the secondary, at least until I had spent three days in vain in driving about Paris to find some one to give me authority to open the cases. After the congresses every one had naturally enough gone into the country. Would it be possible to distribute tickets beforehand to pedagogues, the fees going to the servants?

† See Rapport du 3 juillet adressé au Président de la République par le ministre de l'instruction publique et des beaux arts, relatif à la statistique de l'enseignement secondaire de 1876 à 1889. *Revue internationale*, October, 1890, p. 414.

To improve the school buildings and their installation, a sum of 110,866,666 francs 66 centimes was expended under the advice of a commission of architects.

Through M. Paul Bert parents were given complete control as to the sort of religious instruction given in the lycées to their children. Arrangements too were made for teachers to reach their maximum salary without being removed to another school. The creation of a republican form of education for girls falls within this period. The law Camille Sée was passed at the end of 1880. In 1881 the Training College at Sèvres was founded where the new body of "professeurs femmes" was formed, educative tact rather than erudition being aimed at. In 1882 the academic council of Paris considered a report presented by M. Gréard on the education of girls.

In 1882 there were 5 lycées and 7 collèges (small lycées). In 1889 the numbers had risen to 23 and 25 respectively, with an addition of 65 complementary courses.

The amount granted to secondary education by Parliament in 1876 was 6,240,200 francs; in 1889, 17,177,850 francs.*

In the "organization, methods, and apparatus of higher education" (Group II, Class 8), science decidedly held the first place.

The applications of photography to astronomy were remarkable. From the observatory of Paris came a set of stellar photographs obtained by M. Henry. The whole plate was covered so thick that it was impossible to place the tip of the little finger anywhere on it without covering up several stars. Among the numerous meteorological books was an atlas of the principal storms since 1863. A large model, due to Darboux and Koenig, showed the rotation of a solid body round its center of mass. (See the *Comptes rendus de l'Académie des Sciences* for July 8, 1889.)

A board from the École spéciale d'Architecture showed a very common arrangement in the "special" schools. The three years' course is divided into two parallel sections, one for "education" and the other for "instruction." The case containing the government Publications des établissements de l'enseignement supérieur was closed. The Société d'encouragement pour l'industrie nationale sent a complete set of its bulletins, commencing in 1801. The École libre des sciences politiques showed its programmes and work of its professors and pupils. This excellent school designed for training men for the administrative work of the government is under the directorship of M. Boutmy, one of the four members of voluntary education nominated by the President to the high council. (See the "Control of Education" lower.)

The Société biblique protestante de Paris showed a stand of bibles.

The major part of the exhibition came, of course, from the minister of education, and contained mainly reports from the French Cairo mission of archæology and other scientific expeditions, the museum of ethnography, publications of various provincial learned societies,† the Musée Guimet, the archives, national, departmental, communal and foreign libraries, Bureau des longitudes. From M. Liard, the director of higher education, came numerous publications, statistics for 1878 and 1888. The Chartularium Universitatis Parisiensis, edited by H. Denifle (the well-known student of the history of universities), first volume, has cost 11,925 francs. Under the Collège de France was a remarkable stand, due to M. Marey, for the graphic study of motion. His articles, as well as those of M. G. Demenij, who has devoted himself to the scientific study of physical education, may be found in the publications of the Institut de France, beginning in 1887. By means of a photographic gun and photochronography applied to the study of kinematics, a model of the flight of a gull was obtained, the successive images being registered with astounding rapidity.

The École des hautes études, or "of high chimneys," as it was jokingly called, when first installed near the roof of the Sorbonne, was due to the initiative of

*Accounts of the reports by the various committees of the *Commission pour l'étude des améliorations de l'enseignement secondaire* may be found in the *Revue internationale*, xvii, p. 509.

†1887. *Bibliographie des Sociétés Savantes de la France*, par E. Lefèvre-Pontalis (Impr. Nationale.)

M. Duruy, who also started the school for "special instruction." It is really a college for the "endowment of research," and contains four classes, mathematics, natural science, philology and history, and religious science. Admission is liberally extended to strangers.

The observatories of Paris, Meudon, and the provinces, and the schools for oriental languages and paleography sent their publications. To the French schools at Rome and Athens were due the only exhibits I found bearing directly on the classics.

In the exhibits for higher geometry the instruments were chiefly designed for the mechanical description of curves.

A remarkably fine orrery (Sphérotrope cosmographique, appareil de démonstration pour les études élémentaires de cosmographie, par Huguot attracted considerable attention. For the earth, the movements of translation and rotation, the variations of the seasons and of the length of day and night, solar and sidereal time, as well as the precession of the equinoxes, could be demonstrated; for the moon, the phases, eclipses, syzygy, quadrature, libration, and tidal action; to cap all this the orbits of Venus and Mars were shown.

The movement of higher education in France may be followed in the three volumes of statistics, each covering a period of ten years. The first, issued by V. Duruy, in 1868, is a long list of complaints. The second in 1878, under Bardoux, is very useful from an historical point of view; the last, signed by A. Fallières, is dated May 27, 1889.*

The money spent on higher education in 1870 was 5,972,971 francs; in 1889 it rose to 14,492,595 francs, the share of the state in this sum being about 9,500,000, a striking contrast to the 17,000,000 for secondary and the 90,000,000 for primary. In 1875 the students numbered 9,963; in the year 1887-88 they had risen to 17,630, part of this augmentation being due to the 500 scholarships offered by the Republic.

Among the different faculties medicine takes 8,658 students; law, 5,152; arts, 2,358, and science, 1,335. The last two faculties did not exist in 1875.

Out of the total of 17,630 students, Paris has 9,055, with 5,135 in medicine. Curiously enough the proportion of students to population is the same in France and Germany (1 to 2,000).

Among the women there are 87 bachelières ès-lettres, but there are only 2 licenciées; 113 bachelières ès-sciences, with 16 licenciées and 1 docteur; 1 licenciée in law, 1 doctor in law and 1 in pharmacy. Among the 30 French women doctors 8 are natives, 12 Russians, and 4 Americans.

SECTION VII.—TECHNICAL INSTRUCTION.

Since teachers have never yet had any dominant political power, the school, instead of being based on a scientific knowledge of child nature, has followed, and that usually a long time after, the main current of historic change. At the present moment, when the gap between the school and real life seems painfully large to men engaged in the actual business of the world, schemes for improvement will be many and manifold, and they will receive their greatest development where commerce and school overlap. Here again France has taken the lead. In the Exhibition "technical instruction" has risen to an independent section under the control of the minister of commerce. Of the 118 exhibitors France supplied 112. The complexity and variety of modern life was mirrored in the exhibits. An adequate account of them all would be impossible. They were remarkable in being up to date. The great change in the industrial and agricultural world that has taken place since 1878 seemed to be presented in a small focus. Perhaps all that was

* Statistique de l'enseignement supérieur. Enseignement, examens, grades, recettes et dépenses en 1886. Actes administratifs jusqu'en août, 1888. Imprimerie nationale. A full account of the high council and of the various establishments coming under higher education may be found in this large volume.

obsolete or obsolescent had been placed in the History of Work. On the morrow of the war considerable private efforts were made to develop what the French call "professional instruction." Paris took the lead with its apprentice schools, professional schools for women, commercial instruction in night schools for men and women; Lyons, Marseilles, Bordeaux, Havre, Rouen followed suit, until official control and management by the state was definitely settled by a decree of the 17th March, 1888. The ministers of education and of commerce exercise a dual control.

Directly we rise above the simplicity of the absolutely essential the educational problem becomes extremely difficult. What common bond are we to find in schools for bookbinders, carriage-builders, engravers, lithographers, hat-makers, tailors, jewelers, glass-stainers, lace-makers, engineers, weavers, industrial chemists? The same method is followed here as in other subjects. There are three grades, each with a practical and a theoretical side. The primary grade comprises apprenticeship and higher primary schools, the secondary the schools for arts and trades, while the higher grade is represented by the central school for arts and manufactures.

It would be a grave mistake to suppose, however, that the whole of the living energy displayed springs solely from the action of the state; without any preliminary disputes as to the relative share of the burden due from the state, the commune or the private individual, each seems ready to step in whenever a real want is clearly seen. Of better promise still is the active interest shown in the movement by the actual employers of labor; they often give gratuitous lessons in the schools. Of how much value to the nation must this solidarity of interests be? In what way can the rich help the poor more effectively than by making them better workmen? What charity can be superior to that which tends to destroy the need for charity?

The Paris Conservatoire des Arts et Métiers is the oldest and at the same time the best of the museums for technical industry. Started by a collection of machines and models bequeathed in 1785 to the city of Paris by Vaucanson, and largely enriched during the Revolution by the books taken from suppressed institutions, the conservatory was properly organized in 1794 by a law due to the Abbé Grégoire. At present fifteen sets of public lectures are given on the application of advanced science to commerce and industry. One of the most interesting features of the conservatory is the collection of apparatus with which experiments, afterwards classical, were first performed.

Being itself a permanent exhibition the conservatory sent to the Champ de Mars little more than copies of its plans and its publications; the success of the "History of Work" was, however, largely due to its assistance. Here a piquant contrast was afforded by the juxtaposition of the laboratory of Michel Maier, who, in 1618, attempted to popularize science with a room fitted up by M. Alvergnyat with the most modern appliances for the study of chemistry; between them was an interesting collection of "instruments and objects once belonging to Lavoisier, the founder of modern chemistry, 1743-1794."

Clad in a long, green dress edged with fur Maier is holding up a glass flask to what dim light enters his ill-furnished and dirty room; his sole library seems to be one huge folio aided by cabalistic signs and inscriptions in Greek, Hebrew, and German on the walls.

His apparatus, clumsily cemented together, makes us turn involuntarily to the bright instruments of M. Alvergnyat; we recognize how much the chemist owes to the glass-blower.

In a case are shown copies of Lavoisier's books with his own manuscript corrections, and with them the monumental complete edition of his works published by the Imprimerie Nationale; a watch, with the dial divided into *ten* hours, brings home the love of the decimal system in the days of the Revolution. A charming sketch shows us Lavoisier, with two friends, absorbed in an experiment; at the back, Madame Lavoisier, smiling and expectant, is ready to act as scribe. We are reminded of the picture of the savant and his wife in the Centenary Exhibition of French Art.

Besides the conservatory, France also possesses for the training of her "captains of industry," the *École centrale des arts et manufactures*, the *École des mines*, the *École des ponts et chaussées*, and the *Institut agronomique*. The national schools for arts and trades at Aix, Angers, Châlons—Lille will soon add a fourth—the schools for agriculture at Grignon, Grandjouan, Montpellier, and the various schools of commerce are designed for training foremen. For the great mass of workers the three national professional schools at Vierzon, Armentières, and Voiron (of which we have already spoken) are intended to serve as types for apprenticeship schools. Even Algiers has one of the latter for wood and iron at Dellys. Of these the *École centrale* was founded in 1829, and handed over to the Government by the four proprietors in 1857. From the fees enough extra money has been obtained to advance nearly 2,000,000 francs on their new buildings that cost in all over 9,000,000 francs, and to put aside 500,000 francs as a fund for the staff. The students from this school enjoy a high reputation both at home and abroad. The actual arrangement of the exhibition for classes 6, 7, and 8 was largely due to them.

The school at Aix, founded originally as far back as 1780, to teach the three R's while the children were working as apprentices, was reorganized in 1803, and received the name of *École d'arts et métiers*. Angers was added in 1811.

A striking example of the effect of a good school on the population of a town is shown in the case of the Horological School at Cluses; founded in 1848, reorganized in 1860, and properly installed three years ago, the number engaged in watchmaking has risen from 670 to 4,000, with an output reckoned at 2,500,000 francs.

The Paris Chamber of Commerce has gradually developed a special educational system corresponding in its grades to primary, secondary, and higher education. The *École supérieure du commerce*, founded as far back as 1820, corresponds to the secondary grade. This was supplemented in 1863 by the *École de l'avenue Trudaine*, which numbers more than 500 pupils, while the highest form of commercial study finds a home in the *École des hautes études commerciales*, started in 1882. Nor is this all: In 1874 free courses of lectures were given to women in the various arrondissements. Every year about 300 young girls receive a commercial education. The diploma given on the results of an examination is eagerly sought after, because of the value attached to it by Parisian business houses.

The vast improvement in primary education has been strikingly shown by the cessation or transformation of various societies for the education of adults. In the department of the Basses-Alpes, for example, the 253 classes of 1878 had sunk to 4 in 1888. So common was this change throughout France that no special section had been made for exhibits from illiterate or imperfectly educated adults.

However, the evening classes have not fallen into disuse. The past pupils of the primary school come for instruction in bootmaking, tailoring, electricity, photography, designing, dressmaking, painting on porcelain and silk, etc.

Societies promoting technical instruction.—The *Société pour l'instruction élémentaire* was founded by Carnot in 1815 during the sterile years of the Restoration; from England it introduced into France the method of "mutual instruction." Later on music, gymnastics, geography, outline drawing, and history were added to the three R's. Sunday-schools and public libraries were also started through the action of the society. Medals and grants of money are given to deserving teachers as well as to authors of good books on pedagogy.

With the design of keeping children longer at school, and of arousing a spirit of emulation between different schools, the society started some examinations for which, in 1887, more than 10,000 children entered. In 1864 certain public and free lectures were attended by about 100 girls over the age of 15. The numbers have now risen to 4,000, mainly for commercial and professional training.

The society's *Journal d'éducation populaire* has been published every month since 1815. The *Association polytechnique* was founded in 1830, shortly after the July revolution, by the pupils of the *École polytechnique*, who desired to instruct their brothers in arms. The association has had a varying fortune, including a secession in

1848 on the nomination of the council, which had been limited to members of the *École polytechnique*, and a fire in 1854. Now, however, its sphere of influence covers the whole of Paris and suburbs, and it is connected with many provincial associations. In 1888 there were given 410 sets of lectures on all conceivable subjects. Plumbing and pottery are specially encouraged on the professional side. The forty-three large volumes sent to the exhibition contained specimens of work from the united classes of men and women; within the volumes devoted to each subject, the notes of the successive lessons were taken from the exercise books of different pupils.

The *Association philotechnique* arose from the split mentioned above; although working pretty much upon the same lines as the parent society, it has always devoted more attention to the professional education of its clientèle, and its teaching tends to become more and more technical. In 1888 385 sets of lectures were given; these included electricity, bookbinding, mechanics, bootmaking, photography, the work of employes in assurance offices, etc. The work of the association is aided by subventions from the city of Paris (15,000 francs), the minister of public instruction (4,500 francs), and the minister of commerce (8,000 francs).

The youngest of these societies, the *Union française de la jeunesse*, was born of the late war. Started in 1875, with a striking limitation of the age of 30 for all its active members. The union had at first a difficult existence; however, at the exhibition of 1878 it obtained a bronze medal, and after that its success was assured. Although fully recognizing the importance of technical instruction, the union aims rather at making the workman take an interest in his work. The teacher gives lectures on the history of a particular trade, points out its artistic side, shows its connection with other trades; he strives in fact to rob that terrible line of Victor Hugo of its truth: "They have given the machine a soul by robbing the workman of his."

In some of the sections Sunday mornings are devoted to gymnastics and fencing. Lectures are given in political economy, hygiene, history and geography, civil law and literature. In thus making the workman rather than the work the center of their interest, the union has made the same advance as those pedagogues who make the child and not the subject the center of the school. We are all men and fellow-countrymen before and after we are workmen.*

Perhaps the most striking point about all these societies is, that teachers take no pay. To give money which we do not greatly miss is an easy form of charity, but to give ourselves and the best that is in us, that is true social virtue.

No similar society from the provinces had apparently sent any exhibits for comparison with those from Paris. The Philosophical Society of Bordeaux, for instance, might have sent some specimens from its stone masonry and architecture classes. After their drawings have been finished and colored, the students show that they have thoroughly mastered the principles of construction by making models to match in a very soft stone found in the neighborhood of Bordeaux.

As far back as 1856 Mme. Élisabeth Lemonnier founded a *Société de protection maternelle pour les jeunes filles*, transformed in 1862 into the *Société pour l'enseignement professionnel des femmes*, which opened, in the same year, the first professional school for women in France; it was at the same time purely unsectarian. Three years later Mme. Lemonnier died. However, the work was carried on in her spirit, and the society now possesses four schools to which girls over 12 are admitted after examination.

The course lasts over three years. The mornings are devoted to general education and the afternoons to work in the ateliers, where instruction is given in book-keeping, designing, dressmaking, wood engraving, painting on porcelain and on glass. The exhibits were characterized by the care taken to show the various stages the work passes through. The fact that in all *teaching* the method by which results

* For further details see *Les Sociétés d'enseignement primaire* par M. F. Martel. Monog. pédag., Vol. vi, pp. 493-520.

are obtained is more important than the results themselves is a truth pedagogues used continually to insist on.

A striking feature of the exhibits from the Lyons School of Commerce was the reports furnished by students who had been sent abroad at the expense of the school. The Frenchman whose geographical distribution of the world consisted of "Paris, the provinces, and the rest" seems to be dead.

At another Lyons school, *La Martinière*, the teaching is adapted both for commerce and purely technical work.

It was here that the "méthode Tabareau" for teaching mathematics was first started. Two large models of a class of 98 were shown in the exhibition of the minister of commerce. While one master is working at the black board another sits at the table. Each boy has a slate with his name written large at the top. When he has done his work he can turn this side to the master by means of a handle sticking out of the center of the bottom of the slate. In the boys' school there are 650 pupils. In 1886 under the same management one for girls was started.

The Rhone Society for Professional Teaching sends examples of 150 courses of instruction for adults. These were attended between the hours of 8 and 10 in the evening by 8,000 men and women. Besides specimens of work in wood and iron, modeling in wood and wax, bookkeeping, modern languages, cutting, and dressmaking, there was abundant evidence of the care bestowed on the general education of the students.

Other exhibits too numerous to specify were sent from Marseilles, Bordeaux, Havre, Neuilly, Châlons, Aix, Angers, Cluses, Dellys, etc. Besides the general schools for trade, there are special establishments scattered over France for railways, carriages, plumbing, bookkeeping, industrial chemistry, precious metals, watchmaking, jewelry, weaving, bronzes, paper, hats, lithography, tailoring, carpets, etc.

The natural tendency of professional schools is to multiply in variety. The last three rooms were occupied by the exhibits from the eight schools that Paris possesses at present. Another, the Estienne school, for the industries connected with books, is on the point of being opened.

The brilliancy of the exhibits sent by the Boule school for upholstery makes an effort of the imagination necessary to believe that it was only opened towards the end of 1886. Besides the handsome furniture displayed, a set of note books accompanied by sketches showed how the 101 students spend their holidays.

Although the English boy is handicapped by his weights and measures and orthography (so called), he seems to get as good an elementary education as the French boy, except in drawing and manual work, and that general atmosphere of intelligence which, after all, is the best equipment for life; the specialties will come through the pressure of necessity.

From such a mass of detail what general idea rises up? Surely this, that the popedom of the book is a thing of the past, the appeal to things, the habit of judging only on the evidence immediately before us, the study of physical science delivering us from fear or the belief in chance.

SECTION VIII.—THE CONTROL OF EDUCATION.

Communes, arrondissements, and departments.—The political unit in France is the commune, corresponding very nearly to the English parish. In its 36,400 communes the Government possesses 67,300 schools, a relatively higher proportion than any other country. A group of communes forms an arrondissement, with a mayor and staff. The arrondissements form a department, with the préfet at the head; in his hands lies the executive and he is the channel of communication with the state. Each commune, arrondissement, and department has a council of its own.

Paris.—Paris varies from the normal type, in that its twenty arrondissements are included in a single commune, governed by the town council of eighty members. These, with the addition of a few others to represent the districts not in Paris,

form the council on primary education for the department of the Seine. It is instructive to note that the most radical municipality in the world is precisely the most eager to root out ignorance from amongst its citizens.

The control of primary education, including technical education (placed here for financial reasons), lies in the hands of the departmental council and evening schools. Since, however, the funds are raised by the communes, who add so many centimes per franc to the general taxation, they can within certain limits imposed by the law cut off the supplies and cripple the teaching.

Since the cornerstone of national education is the compulsory and regular attendance at school of all children of proper age, we find as early as December, 1871, that Jules Simon had elaborated a bill on this subject; but his leading principles did not become law until March 28, 1882. The day after, a circular was sent by the then minister, Jules Ferry, to the préfets to set up the machinery of the new law, viz: school commissions; the examination of children educated at home; school bursaries. With an unerring and characteristic instinct the clerical party at once seized on the school commissions as the vulnerable point of the system. With the exception of drawing up a list of the children of the right school age the commissions have been a failure, in spite of the few changes introduced by the organic law of October 30, 1886; although not legally put an end to they have practically fallen into desuetude.

Dreyfus-Brisac on compulsion.—In an interesting article on the principle of compulsion M. Dreyfus-Brisac* ascribes the failure of the commissions to the hostility of the clergy, the confusion of administrative and judicial functions, the smallness of the commune as the unit, and the lack of the electoral elements.

Probably the chief solution is to be found in the extracts made from the reports of the academy inspectors: "Well-managed schools are always full;" "the value of the school is the value of the master; attendance is regular only with good teachers;" "with few exceptions absences are frequent only in poor schools; there is no lack of pupils in good schools." A regular attendance then, like the absence of punishment, is the mark of a good teacher.

The first examination of children educated privately was held in 1884; the sole duty of the "jury" was to see that some instruction had been given. Of the 2,864 children examined, at first by writing and then orally, 2,521 were passed and 343 rejected; 339 did not put in an appearance; what happened to these latter we are not informed.

The school bursaries, started in 1867 to help the poor and made compulsory in 1882, have proved of greater benefit. Supported by the town, by voluntary subscriptions, and in the case of poor communes by the state, great assistance in the way of class books, free meals, and clothing has been rendered to poor children. In the year 1887 the receipts for Paris amounted to 1,172,706 francs and the expenditure to 953,596 francs, the chief items being 246,333 free portions for meals and 163,625 francs spent in clothing and books. Money is also spent on the school battalions, holiday trips, gifts to the teachers, etc.

Inspectors.—There is a large staff of inspectors, general and ordinary, but their sole duty is to see that the provisions of the law have been faithfully carried out; further their powers do not go.

Higher primary education, which lies somewhere between an English middle-class school and the modern side of a classical school secondary education of a classical nature, the faculties corresponding to the universities and schools of medicine in England, and special state education for the army, navy, etc., all come under the control of the seventeen academic councils into which France, including Algeria, has been divided, the necessary funds being derived from public sources.

Le conseil supérieur.—Now both the departmental and academic councils stand

* L'enseignement obligatoire et les commissions scolaires. Monographies Pédagogiques, Vol. I, pp. 343, 455.

under the control of the high council for Education, perhaps the most pregnant and weighty of M. Jules Ferry's numerous reforms.*

As its constitution embodies the democratic principle of representation, it will probably serve as a model for the organization of other professions as well as for that of teaching.

Napoleon, in 1808, had placed the whole of the education of France in the hands of a grand master, nominated by him for life, aided by a council of thirty, ten appointed permanently by Napoleon and twenty by the grand master annually. This régime lasted practically till the sinister changes of 1850, when the state, eager to vindicate its power and to bring the direction of education into its own hands, swamped the teaching element in the council by representatives of the "great social interests;" although in 1873 an improvement was made by electing some of the members of the council it was not till 1879 that any real reform was made. The law of 1873 was due to expire on March 19, 1879; four days before, Jules Ferry brought in a bill, differing from the law of 1808 by the predominance of the elective element, from that of 1850 by the exclusion of clergymen and of those who were considered to represent "social interests," and from both by including representatives of all "the great establishments of public instruction and in particular of the three stages of education."

After considerable discussion and a few changes the bill became law on February 27, 1880. The organic law of October 30, 1886, considerably increased the number of electors for the six representatives of primary education by admitting the heads of the higher primary schools and those assistant teachers who had been already elected to serve on the departmental councils.

As far as can be seen from M. Jallifier's article this is the only way in which the rank and file of the primary teachers can bring any influence to bear on the government. The democratic principle being once conceded it seems almost a pity not to carry it to its logical limit.

The president nominates four more to represent voluntary or private education. The term of office is for four years.

The full council of fifty-eight members meets twice a year, in July and December, usually for a week at a time. Matters are prepared for them by a permanent section of fifteen which meets as often as necessary. This fifteen is composed of the nine nominated by the president with six taken by the minister from the other forty-seven. So far no member of a lower professional rank than an *agrégé* has been put on the permanent section.

The meetings of the council are private, but the motions and decisions in matters of discipline are published.

Although strictly the council is only consultative, its real power is very great. The first council (1880-1884) mainly distinguished itself by drawing up new programmes of work; the second (1884-1888), by pruning out the crowded portions—the number of class lessons in secondary schools was reduced to twenty in 1884; while the present one (1888-1892) is mainly concerned with method and the internal government of schools. Perhaps, however, the surest mark of pedagogic wisdom was the foundation of two *higher* training colleges, one for women at Fontenay-aux-Roses in 1880 and the other for men at St. Cloud in 1882.

SECTION IX.—THE TEACHING OF MORALITY.

Before the lofty ideals of the scholars of the Renaissance could find an entrance into the school, they had to seek the protection of the political powers and were thus dragged down to take sides in the ugliest of all combats, the combats of religious sects. From the pernicious principle that the school is a forcing bed for the

*Le conseil supérieur de l'instruction publique (1880-1889), par M. R. Jallifier. Recueil de monographies pédagogiques, Vol. 1, pp. 493-457.

maintenance of the numerical strength of a sect, worked with the greatest success by the Jesuits, whose skill in method has masked the badness of their aim, the French have been the first to clear themselves. The school is not the church and therefore the clergyman can not be the schoolmaster. Since, however, national morality is the salt of national life, the teaching of morals is an imperative necessity in primary schools.

Although the laws of 1833 and 1850 had officially recognized that "primary education comprises instruction in morals and religion," it came to very little more than a mechanical learning by heart of the catechism and the Bible. To put something living in the place of this was naturally a matter of prime importance to the French pedagogic reformers. At the exhibition of 1878 M. Buisson addressed a large number of teachers on the best way of inculcating morals. The necessary complement, instruction in civic duties, was urged with stormy eloquence by P. Bert, one of the moving spirits in giving legal form to the new educational movement, in a speech at the Trocadéro in 1882, on the anniversary of the formation of public libraries in the department of the Seine. In spite of determined and virulent opposition the "infamous law" of March 28, 1882, was at length passed. All that was left to the clergy was a whole holiday for the children on Thursdays, when, if their parents wished, they could receive confessional instruction. Suddenly called on to perform a delicate and important task in the face of hostile observers, the primary teacher naturally looked to his superiors for help. On June 21 a report on the proper method of teaching morals in training colleges was read by M. Janet to the permanent section of the high council with the result that a set of rules was sent out on July 27. Next year a circular letter was forwarded to all the primary teachers by the then minister, M. J. Ferry, affording a piquant contrast to a letter with a similar object sent by M. Guizot, half a century earlier.*

J. Simon, H. Marion, P. Janet, Ch. Renouvier, G. Compayré, Mézières, Liard, J. Steeg, Père Laloï, M^{me} Coignet, H. Gréville (pseudonym of M^{me} Alice Durand, née Fleury), and a host of others wrote manuals in which at times civic and moral instruction were confused to the detriment of both. The manuals of M. Compayré had the honor of being burnt by the clergy at La Romiguière. H. Gréville's *Instruction civique et morale des jeunes filles* is presented by the city of Paris to all the girls in its communal schools.

Received with indifference by parents, with hostility by the clergy, what fortune has this teaching of morals experienced, confused of set purpose as it was with party politics? Is it possible to make, as it were, an agricultural forecast of the future harvest?

In answer to questions from the minister 558 reports were sent in by academy inspectors (57), primary inspectors (337), heads of training colleges (97) and teachers (67).

M. Lichtenberger's report.—These realistic "documents" have been analyzed by M. Lichtenberger in the fairest possible way: unfavorable reports have not been suppressed. The main result is held to be distinctly encouraging. "The morality of the masters has improved; they do their work better; they are franker, less obsequious, more tolerant." "Lying is not so frequent: on this point all the masters are agreed." Bullying, scribbling on the walls, torturing birds and animals tend to cease. "Politeness is more thought of even in the remotest parts of Brittany." The mothers have been quite won over by the improvement in the children's manners: "it sometimes happens that parents (mothers especially) come to congratulate the inspector on the habits of neatness, cleanliness, politeness, love of work, obedience that their children have acquired at school." "Can we believe," says the head mistress of a training college, "that our students are happily changed enough from the moral point of view to exercise an influence in their turn on the souls of the children. Before any direct proof I answer 'Yes:' I can not think that our young

* See fascicule 33: Deux pédagogues, M. Guizot et M. Ferry.

girls do not leave us better than when they came; I for my part *must* believe that our efforts are not useless or else my work would be no better than a mere trade; there would be no reason why I should take it up rather than any other. Happily experience confirms what my instinct tells me. When we have watched the progress of our pupils for three years, we see them slowly changing, and on contrasting a student on leaving with what she was when she came, I tremble with joy as I notice the happy change that has come over her." "I have seen lessons where a shudder seemed to run through the room, where, under the influence of a strong and reciprocal emotion, the alert faces and glowing eyes looked as though they wished to hasten on the moment of spiritual combat." With some of the reports letters from past pupils had been inclosed. With a touch of dainty malice, M. Liechtenberger gives the following as the last of his documents: At the examination for certificates the question set for French composition was this, "With some of your friends you go to a fair; you have no money in your pocket, as your parents are poor; suddenly you find a purse with a 5-franc piece in it: say what you would do with it?" Of the 111 candidates, 30 came from secular schools and 81 from confessional schools. Of the 30, there were 23 who knew that it would be a theft to take the money, the other 7 bought toys, fairings, etc. Out of the 81 pupils from the confessional schools only 30 knew that a thing found belongs to the person who lost it. The other 51, without the slightest twinge of conscience got on the whirligig, ran, jumped, and made a number of small purchases. One little girl took the money home to her parents, who kept it, "and this sum was very useful to them; they had three or four good meals, whereas if it had been returned to the one who lost it, she would probably have squandered it." The above extracts give but a faint reflex of the impression left by M. Liechtenberger's words. They should be read in their entirety by all who seek for a solution of this vexed question. Can we refuse our assent to his final words? "The disappearance of the confessional schools, if we think the matter over seriously, is good for the pupils, the masters, and for the clergy too. A broader spirit of tolerance and concord animates our schools. The things that unite men rather than those that divide them are brought to the front. Seated on the same benches, taught by the same methods, nourished on the same ideals, the children of different religious bodies will make their parents forget their ancient strifes. Instead of having two or three schools in the same district for the various differences of faith, we shall have a single school with two or three classes to answer to the wants and talents of the different ages of the children. The master, freed from the teaching of religion, for which he has neither vocation nor training, is no longer tied down to a mechanical repetition, lacking both conviction and authority, of formulas that have no meaning for him. On the other side, the priest who has now the sole charge and the sole responsibility of this teaching, brings to it more zeal, more time, and more care. To a knowledge of what the sacred formulas mean, he adds the fervour that gives them life and the impressiveness that makes them sink into the child's mind.

"Almost everywhere people are beginning to see the advantages that spring from this division of labor. The controversies, political rather than religious, aroused by the law of 1882, have ceased."

Accepted by the parents this change must be more than welcomed by every true teacher, for it hands back to him the noblest part of his task. Here at least he can not be replaced by the book; here at least the weight of his character, rather than the plenitude of his knowledge, must be recognized; here at least he has a fair field for all that is best in him.*

Mr. Cunyngnam's report.—A curious and perhaps unconscious contrast is afforded by Mr. H. H. Cunyngnam's report to the charity commissioners on Primary and Technical Education in the City of Paris, written in 1887 and published in 1890. "No moral system has been adopted by the State, so that stoicism, epicurean-

* The two books specially mentioned by M. Liechtenberger are H. Marion's *Leçons de morale* and Ch. Renouvier's *Petit traité de morale à l'usage des écoles primaires laïques*.

ism, egotism, utilitarianism, and absolute morality (*e. g.*, that of Kant) are all jumbled together. Some of the masters teach on one ground, some on another; most have no system whatever." Is it any reproach, we may ask, to astronomy to take the calculations of Kepler and to pass by his discussion as to whether the earth sings a deep bass in the music of the spheres? May not morals be eclectic? Are we to take as the effect of his teaching the statement on the preceding page, "At their dinners it is charming to see them share their meal and their wine with those who have none. It is not too much to say that for a boy to drink his own half bottle of wine himself is rather the exception than the rule, and it is comical to see the way in which the empty dish of a boy who has not got a dinner ticket is filled up by spoonfuls from the others." Perhaps then, for practical morality, it is not so essential, after all, to have a "system."

Civic instruction.—The article by M. L. Mabillean on civic instruction (*Monog. Pédag.*, Vol. iv, pp. 203–218) is not based on any documents, and it is still from M. Lichtenberger that we learn of the great development of patriotism which he ascribes mainly to the influence of Bruno's Francinet and Tour de France.

"Teachers cannot treat any subject without letting their patriotic feelings overflow, often very unseasonably. Such excesses they know are viewed with indulgence."

"As far as patriotism was concerned, one master assured me it was a feeling that needed restraint rather than encouragement. All my pupils know, he said, that they belong to a conquered nation, and if their feelings do not change when the day comes, they will know how to do their duty."

"Is not the excellent patriotic current that we see with comfort and consolation the work of the school?"

Text-books on civic instruction.—There is a very comprehensive list to be found under the headings: *Éducation civique, Héroïsme et Patriotisme*, in the *Catalogue général de la Librairie Française*, rédigé par Otto Lorenz, 1888. The following list includes some of the most prominent French text-books:

J. E. Alaux: *Instruction morale et civique.*

Paul Bert: *Instruction civique à l'école (notions fondamentales).*

B. Bouniol: *La France héroïque; vies et récits dramatiques d'après les chroniques et les documents originaux (4 vols.).*

G. Bruno: *Le tour de la France par deux enfants. Devoir et patrie.*

MM. Bardeau et Reverdy: *Le droit usuel, le droit commercial, l'économie politique à l'école.*

E. Charavay: *L'Héroïsme civil (1789–1880).*

G. Compayré: *L'Instruction civique.*

J. de Crozals: *Manuel d'instruction civique (2 vols.).*

M. J. Gérard: *Cours d'instruction morale et civique d'écolier français.*

H. Gréville: *Instruction morale et civique des jeunes filles.*

E. Hauriot: *Vive la France! Moreaux choisis, lectures, réécitations et chants patriotiques.*

P. Lalo: *La première année d'instruction morale et civique. (Inscrit sur la liste des ouvrages fournis gratuitement par la ville de Paris à ses écoles communales.)*

P. Lalo et Picavet: *Traité d'enseignement moral et civique.*

A. Lair: *L'Héroïsme français.*

A.-P. de Lamarche: *Nos devoirs et nos droits.*

J. D. Lefrançais (J. Darmesteter): *Lectures patriotiques sur l'histoire de France.*

L. Liard: *Morale et enseignement civique.*

L. Mabillean: *Cours d'instruction morale et civique, which includes:*

Cours élémentaire et moyen d'instruction morale.

Cours supérieur et moyen d'instruction morale.

Cours élémentaire et moyen d'instruction civique.

Cours supérieur et moyen d'instruction civique.

(Avec la collaboration de MM. Levasseur et Delacourtie.)

Mme. Henriette Massy: Notions d'éducation civique à l'usage des jeunes filles.

Maxime Petit: Le courage civique.

Charles Schuwez: L'École civique: les droits et les devoirs de l'enfant, de l'homme et du citoyen.

J. Simon: Le livre du petit citoyen.

J. Steeg: Instruction morale et civique.

The following are among those used in Switzerland:

Léon Bornet: Cours gradué d'instruction civique.

A. Bourqui: Notions sur nos devoirs et nos droits civiques.

Numa Droz: Instruction civique.

SECTION X.—TRAINING COLLEGES.

When Shakespeare was a boy Richard Mulcaster claimed a special college for teachers in his ideal university; "for if the chancel have a minister, the belfry hath a master; and where youth is, as it is eachwhere, there must be trainers, or there will be worse. He that will not allow of this careful provision for such a seminary of masters is most unworthy either to have a good master himself, or hereafter to have a good one for his. Why should not teachers be well provided for, to continue their whole life in the school, as divines, lawyers, physicians do in their several professions?" Yet the Germans were the first at the end of the last century to bring the idea into reality, and the French of to-day are the first to make it an integral part of education. Is not the training of teachers implicitly contained in the fruitful principle of compulsion? If the state compels children to learn from its servants it must see to it that those servants are capable. A striking proof of the pedagogic wisdom of France in building up men before bricks has been already given under the "City of Paris."

In all cases admission to a training college is obtained through a public competitive examination. The students, both men and women, are lodged and taught at the expense of the state. They agree to serve in the teaching profession for ten years; in case they leave before that time they promise to repay the cost of their maintenance at the training college. They are specially trained for the state examination, which grants the diploma conferring the right to teach. This examination, however, is not confined to men, but is open to all who possess the necessary qualifications of age, degree, etc. Although, even during the seige, J. Simon wrote to the mayor of Paris begging him to find the capital for two training colleges, the subject was not taken thoroughly in hand till the first appearance of J. Ferry as the minister of education (February 4, 1879–November 14, 1881). The advantages accruing to teachers by Guizot's law of 1833 were confirmed and extended to women by the law of August 9, 1879, which ordered all the departments to provide themselves within a period of four years with two training colleges, one for men and another for women. This law has, with the exception of a few departments, been carried into effect so that France now possesses 171 training colleges, all of them of course being secular and with gratuitous instruction.

The higher training colleges.—Now, as these colleges are the living source of primary education, it is highly desirable that all the teachers in them should form the élite of the profession. By a development of the principle of training at present peculiar to France, an effort to attain this object was made by opening two higher training colleges, one at Fontenay-aux-Roses for women, in 1880, and the other at St. Cloud, in 1882, for men.*

*The latter half of Vol. II of the *Monog. Pédag.* is taken up with the training colleges: *Notice historique sur les écoles normales*, by M. Jacoulet; *Organisation et administration*, by M. Clerc; *Extraits des rapports des recteurs sur le développement et la situation des écoles normales*; *Notices sur les écoles normales supérieures*, by MM. Pécaut and Jacoulet.

A brilliant staff of professors and lecturers was obtained for the training of the 19 women who were successful among the 30 candidates for admission; of the former 15 have since become heads of training colleges. The whole expense is borne by the state; even grants of £10 a year are made for clothing and traveling expenses. The 30 students, who, on entering, must be between the ages of 19 and 25, receive a common instruction in literature, psychology, morals, pedagogy, modern languages, and singing, and are then divided into two equal classes for arts and science. The number of competitors for admission averages 160 a year. The course is intended to extend over three years, but so far, owing to the wants of the departmental colleges, it has been limited to two. Out of lecture time the students are quite free and on Sunday they can stay out the whole day and go to what place of worship they please. They rise at 6 a. m. and go to bed at 9 p. m. Work at night or during the time for recreation is absolutely forbidden; indeed, it has to be all over by the dinner hour, 7:30.

The college at St. Cloud, formed in imitation of the one at Fontenay, has practically the same régime; handicraft was added to it in 1883 on the suppression of the *École spéciale de travail manuel*. Candidates for admission, of whom not more than twenty are received annually, must be between 19 and 25, and present, among other things, a medical certificate stating that they are capable of standing the strain of teaching. The students are treated as men and are not put under any superintendence. They can take exercise in the park of St. Cloud; in the common room billiards, drafts, periodicals, etc., are to be found. The favorite amusement on Sunday is to go to some *matinée*, in which the students are encouraged; they have to be in by 10 p. m. The Pape-Carpentier Training College at Versailles has for its object the preparation of head mistresses for the practicing schools, primary and maternal, annexed to the various training colleges for women.

A striking proof of the extraordinary interest taken in pedagogy was the petition signed by 1,100 Parisian teachers that the conference in connection with M. Marion's lectures on education for the general public at the Sorbonne should be held at a time convenient for them to attend. At first pedagogy found shelter among the professors of philosophy in the *faculté des lettres*; but M. Marion's lectures in 1883 had such a great success that his *cours complémentaire* was changed into a chair of pedagogy (1887). At Lyons, Bordeaux, Nancy, Montpellier, Toulouse, courses of pedagogy were given.

The *École normale supérieure* in the Rue d'Ulm at Paris, for whose origin we must go back a century and a half,* provides teachers for secondary and higher education. The degree of *licencié* and the probable requirement of the *agrégé* are necessary to become a teacher in a *lycée*; for a professorship in a faculty to the *licencié* must be added the probability of obtaining the degree of doctor.

Entrance for students between the ages of 18 and 24 is obtained by a competitive examination; for the arts side they must have qualified as *bachelier ès-lettres*, and as *bachelier ès-sciences* for the science side. The art students devote the whole of the first year to working for the *licence ès-lettres*. In the second year they study literature and history; there is no examination. For the third year five groups are made—history, literature, philosophy, grammar, modern languages, in any one of which the degree of *agrégé* may be obtained, and to this work the whole time is given up.

The science students spend the first two years in working for the *licence ès-sciences mathématiques* and *licence ès-sciences physiques*, and during the third year on their *agrégation*; the natural-history students are allowed four years.

The time devoted to the theory and art of teaching seems to be very small. During their second year the students who intend to take their *agrégation* in history have to give model lessons on history and geography, and, of the two weekly conferences at the Sorbonne, one is especially designed for future secondary teachers.

* *L'école normale* (1810-1883). *Notice historique* par P. Dupuy. (Cerf, Paris.) In the exhibition was a MS. by M. G. Perrot, *L'école normale, notice historique*.

The *École normale spéciale* at Cluny,* founded in 1836 by M. Duruy, is intended to form teachers for secondary *enseignement spécial*; in addition, a very small number of modern-language teachers are trained there. Students, who at the end of their second year have obtained the *certificat d'aptitude*, are allowed to stay another year to study for their *agrégation*, while in the case of modern languages they are sent abroad with a scholarship of 1,200 francs.

The literature and modern languages sides do not thrive, while the science side is overcrowded. This seems to be mainly due to the entrance examination, which curiously enough is below the level of the various diplomas the candidate must possess beforehand. For ten places 200 candidates, mainly primary teachers, have been known to present themselves.

In 1832 a secondary *École normale* for women was founded at Sèvres, under the direction of M. Legouvé, with Mme Jules Favre as head mistress.

Both for men and women the general plan for entrance is to have written examinations at the seventeen academic centers, and to send on the successful candidates for an oral examination at Paris.

Only those students who at the end of their second year have obtained the *certificat d'aptitude* are allowed to stay another year to work for their *agrégation*.

In all these secondary training colleges pedagogy seems to be completely overshadowed by the preparation for a scientific degree; surely teaching, that is at once a science and an art, and that makes the most varied demands on the totality of a man, ought to stand higher than science, which is addressed to only one part of him. Paulsen's just remark, that we need to protect *die Rechte der Lehrerbildung gegen die Gelehrtenbildung* seems still to be as true for France as for Germany or England; for, according to M. Quibert, the students of the *École normale supérieure* are parceled out at the end of their third year among the lycées and teach under the direction of members of the staff for a fortnight!

In the case of women, medical certificates are required before the written and again before the oral examination to certify to the physique needed to support the fatigues of teaching.

SECTION XI.—EDUCATIONAL MUSEUMS.

Although the first attempt to found an educational museum was made in England as far back as 1854, the movement has not thriven. The Society of Arts handed over a large quantity of books, apparatus, etc., from its Centenary Exhibition to the Government, who lodged them at South Kensington; as so often happens in England, the teacher has been put aside, this time in favor of the man of science, and only a portion of the library is kept up to date.†

Most of the other capitals of the world followed suit. The Paris Musée Pédagogique is probably the best. It was founded on May 13, 1879, by a decree of Jules Ferry, and was designed to contain "a museum and a central library for primary education, school apparatus, historical and statistical documents, and class-books, both French and foreign."‡

The Musée was organized by M. F. Buisson, who had already pointed out the need of it when he was a primary inspector. The International Exhibition of 1878 supplied a large amount of material, which, when moved from the Bourbon Palace to the Rue Lhomond, was enriched by a fine collection of nearly 7,000 volumes, bought by the Government from M. Rapet.

*A history of the first six years of the school has been published by M. T. Roux.

† "The History of Educational Museums" in the *Journal of Education* (London), June, 1890, gives the leading facts.

‡ Le Musée pédagogique et la bibliothèque centrale de l'enseignement primaire, par M. A. Beurrier. *Monographies pédagogiques*, Vol. III, pp. 1-38.

In 1885 the Musée moved into its present home in the Rue Gay-Lussac and began to develop rapidly. At present the library of 50,000 books occupies 16 out of the 30 rooms. Geometry, art, gymnastics, geography, needlework, handicraft, etc., are all well represented, while the exhibits number close on six thousand.

There is an excellent laboratory for the teaching of physics; in the chemistry the compartments are so arranged as to contain the whole set of apparatus necessary for teaching the leading properties of the elements.

The organic law of October 30, 1886, brought a sudden influx of students. Nine hundred primary teachers applied for instruction necessary for them to obtain the compulsory certificate of pedagogic skill; only 225 could be accommodated. In the physical laboratory from 60 to 70 men and women receive every year practical instruction in scientific manipulation. The 20 tables are so arranged that the students pass along in pairs under the guidance of the professors.

The chief part of the Musée is naturally the library. When readers have books from the circulating library they have only to pay for sending them back in a neat wooden box, of which a model was shown in the exhibition. An average of 12 copies of 219 standard works brings the circulating library nearly up to 3,000 volumes; another 1,200 must be added for the "*bibliothèque récréative*."

The 103 volumes of the catalogue have an ingenious arrangement of three hollow screws, passing from cover to cover, by which single new sheets can easily be inserted. It contains both a subject and authors' catalogue, but the whole is arranged under one alphabetical heading.

On my visit much of the apparatus shown was very dusty. Ought not an educational museum to be intimately connected with a training college?

In 1879 a commission sat at the Musée to investigate the scientific teaching in the various training colleges. A report was presented in 1880 to the minister, and in consequence thirteen typical collections, corresponding to the different branches of science, were deposited in the Musée. Apparatus was not sent to the various colleges till it had been tested and found to correspond to the model type. A complete set costs 4,600 francs. A higher primary school can be equipped for 2,400 francs. Afterwards typical collections were made of designs, edible fruits, and herbariums.

SECTION XII.—OTHER EDUCATIONAL AGENCIES.

Graphic exhibit of statistics.—In the room belonging to the bureau of statistics the most ingenious and striking graphic methods had been employed to make the general condition of France, as far as it could be shown by numbers, plain and eloquent to the most careless visitor.

Blocks of wood, cut in the shape of the departments and proportional in thickness to their populations, were pieced together (like a child's puzzle map) and gave the distribution of the inhabitants of France. The rod representing Paris was so long that it had to be hung by the side.

The progress of popular education was shown by the signing of the marriage certificate. Ten years ago 23 per cent of the men and 35 per cent of the women made their "mark." The figures now are 15 and 24 per cent respectively. In the Vosges everybody can read and write, but in Finisterre one-half of the population is still illiterate. Within thirty years the number of strangers in France has trebled itself, standing now at 1,126,000. The Italians affect the southeast, the Spaniards the south (especially along the Garonne), the Germans (100,114) and the Swiss the east and northeast, with a tendency to spread into all the departments; the Belgians the north and the basin of the Seine. The English (36,134) Paris and the North.* The total number of French in the world is put at 45,331,000; Algeria contains 4,200,000 and the rest of Europe (France of course excepted) only 200,000.

* See the *Annuaire statistique de la France* (Service de la statistique générale de France).

On another map the mean death rate of 23 per 1,000 was colored, while the higher rates were represented by gradually deepening shades of rose color and lower by green. The "mortality summit" were highest on the seacoast of Brittany (40 to 60 per 1,000) and lowest in Loire-Inférieure and Sarthe (10 to 15 per 1,000). Births have a tendency to diminish in districts where the inhabitants are well to do; on an average French families have only one child apiece; infant mortality increases rapidly where the children are given to paid nurses. By forming and superposing a set of discs proportionate in area to the deaths, a column was obtained, broadest at the base (1 to 5 years). Slowly and gradually the circles narrowed into a thin waist at 38, spreading out again gradually but more rapidly till 70 was reached, and then swiftly dropping down almost to a point at 75.

In other diagrams a line down the center divided the sexes and different tints showed whether maids, married women, or widows, or bachelors, married men, or widowers were being represented.

Perhaps the best example of an apprenticeship school is the one founded in 1863 by M. N. Chaix for the purpose of furnishing competent workers for all the branches of typography. In the lower branch of the service the apprentices are taught to tend the machines, etc., and they receive a daily wage rising from 75 centimes to 3 francs 50 centimes; the highest branch includes type-setting, engraving, and lithography, and here a daily wage ranging from 50 centimes to 2 francs is paid. To encourage skill and good conduct monthly bonuses are given. The time to be served is four years, and the natural tendency of the apprentices to leave as soon as they can gain a small wage, but before they are properly trained workmen, has been met by keeping back 25 per cent of the money made by the work of the apprentices; this sum, amounting usually to 500 francs, is handed over to the parents only after the full time has been served.

Compulsory thrift.—An elaborate system of compulsory thrift, aided of course by the management, runs through the whole of the "Maison Chaix." By paying his installments regularly a workman can look forward to a pension of 400 francs a year at the age of 55. There seems to be nearly as much "professional training" in thrift as in printing.

Although the pedagogue may go carefully through the 102 pages of the official catalogue, devoted exclusively to education and instruction, his labors are by no means over. "Vous êtes orfèvre, M. Josse" may be replied, but it is no exaggeration to say that the school was everywhere and in everything. Perhaps the pictures afford the surest sign of the penetration of the school into everyday life. One signed "Teo" was a remarkable study of a writing class, in which the physiognomy of every child was different, from the "good boy," who wrote with ease, to the lad who had to move head, tongue, and hand in unison. Another by J. Geoffroy, "Coming out of school," was a charming study of a girl looking after her little brother, while the Algerian section presents us with a *détail intime*; the master is on the point of caning one of the boys on the soles of his bare feet.

Under agriculture he will find a special subsection for method and material, the place of honor being taken by the magnificent display of the National Veterinary College at Lyons. On a life-size model of a horse slips of leather had been pinned to bring out the relative proportions. Some of the wax imitations of the diseases of animals were lifelike enough to make the gorge rise. Under "Insects useful and destructive" was a good case of bees and butterflies exhibited by E. Deyrolle, 46 rue du Bac. From a set of cubes representing the amounts spent by the government on agriculture we learn that the 112,800 francs of 1789 had risen in 1889 to 8,329,705.

Gymnastic apparatus.—In one of the buildings of the Économie sociale was a fine display of gymnastic apparatus sent by the Belgische Turnbod. A large synoptic table shows what the various countries have done for physical culture. Under England we read: "The organization is extremely defective; the very conception of

a regular gymnastie training does not exist. Some of the so-called higher schools have their games." The writer does not seem to know of the public schools' gymnastie competition held every year by the military authorities at Aldershot. As in everything educational in England, no test is applied to the teachers; they are almost always sergeants who have served their time in the army.

Games will always stand first in England; they are played in the open air and have a keen element of delight in them that gymnastics can never rival, although they are absolutely necessary as a corrective for the harmonious development of the body. We often see a football player whose body and legs seem to belong to different sized men. Gymnastics bear the same relation to games as a piece of literature read in class or at home. A magnificent book on *La technique gymnastique*, due to N. J. Cupérus, the president of the Turnbod at Verslaggever, was written in Dutch and French.

The enormous development in France since 1873 was shown on a large board, due to the *Sociétés de Gymnastique de France*, their newspaper organ being *Le Gymnaste* (39 rue de Lancry.) Here again we feel the want of Germany.

A great object lesson.—Indeed the whole exhibition might not inaptly be called a great object lesson of the world. In each country a bold map painted on the wall was supplemented underneath by a relief plan, flanked on both sides by large albums of photographs. Remote countries ceased to be red or yellow spots on a flat vertical map. To see the land falling from the mountains to the sea, and covered by a network of routes in which the cities stand out like knots, to watch the people at work in the house or the field, the children in school or at play, the commonplace details of life in the streets, to gaze at scenes of exquisite beauty, filling one with a longing to visit them, all this drove home the thought that steam has knit the world together until our great cities are but the separate rooms in the vast house of humanity. Here, too, we feel as in our own home. Man lives and works in fruitful communion with the earth; here too, as Montesquieu puts it, each man seeks his own interest, but his action we find makes for the good of all.

Perhaps the best object lesson in the exhibition was the great model of the earth made to a scale of the millionth by MM. Villard and Ch. Cotard. Housed in a circular building of considerable height near the Palais des Enfants, the first view of the North Pole was obtained by mounting in a lift. A spiral staircase led to the base, where an attendant made the world move, sometimes reminding the spectator of those Assyrian deities whose duty it was to wind up the sun.

The metal frame weighed 10 tons and supported 3 tons of cardboard painted in oil, the 586 panels being arranged along the meridian lines. Even on so large a scale neither the flattening at the poles nor the highest mountains could be represented, but the sea depths were marked by six tints of blue, the lightest denoting less than 2,000 meters and the deepest more than 8,000.

A skillful use of colored lines and pins brought into high relief the great ocean routes of the various nations of the world, the railway and telegraph services, the voyages of great discoverers, the mines for coal, copper, iron, silver, gold, diamonds, and petroleum. The greatest service of the globe was in giving an adequate sense of the relative proportions of the different countries. The two spots for the British Isles seemed at no great distance from America; the meridians were gathering close as they neared the Pole. Siberia seemed a large part of a belt round the world.

We have all learned that the sea covers three-quarters of the surface of the globe, but the fact became a reality when it seemed an age while the demiourgos below was making the Pacific pass before our eyes; for 510 square meters of sea on the model there were only 136 square meters for the earth.

And watching, with eternal lids apart,
Like Nature's patient sleepless Eremite,
The moving waters at their priestlike task
Of pure ablution round earth's human shores.

The graphic method of presentation was fully honored on the walls, which contained a vast amount of that interesting information we are so quick to forget. England shone supreme in the shipping interest. China, with its modest 13 kilometers of railway, stood in strange contrast with the 242,000 of America. At the basement, on the same scale as the model, was a section showing the probable thickness of the earth's crust, the relative height and depths of the mountains and sea, together with the approximate altitude of the atmosphere.

A copy of the curious map of the world made by Martin Béhaïm, of Nuremberg, just before the discoveries of Columbus, showed that the last three centuries have outstripped all antiquity in its increase of geographical knowledge. Perhaps in the future the spiritual discoveries of our century of the religions and literatures of the world will seem still more remarkable.

Perhaps the most immediate problem before practical teachers at the present moment is the careful connection of the various stages of teaching with one another. The child trained in the kindergarten finds himself suddenly plunged into a new and alien atmosphere when he "goes to school."

In England no provision has been yet made for dovetailing secondary and primary education, while in the latter a grave injustice is done to boys who leave at 17, as they receive only an unsatisfactory portion of the scheme devised for future university* students.

The impression left by the dolls was painful. They seemed to be made rather as models for the young ladies at a very fashionable milliner's to work by than the baby's baby, made not to be admired for its fine clothes, but to be battered to pieces and loved. Imagine a small boy's disappointment at finding his sister's doll had no sawdust in it.

Over the front door of a small modest two-storied house were the words *École communale de garçons*. Again we meet with a bewildering wealth of exhibits. If any school in the country contained a tithe of them the mental digestion of the children would suffer from a heavy intellectual surfeit. Would it not have been better to give a rigidly true copy of some rural school with the actual furniture and apparatus, perhaps a bit the worse for wear? Does the schoolmaster live on the premises, and if so what sort of furniture does he have? To know how a country treats its teachers is not a question of idle curiosity, and the best answer would be to see them "at home." The actual sum paid as salary conveys little information to a foreigner. However, the beautiful drawing copies of Monroq Brothers attract our attention and we brace ourselves up to a serious study of the exhibits. These copies are stamped in relief on white cartridge paper and range over all possible subjects for elementary drawing. Some of the designs were exquisitely beautiful. In the same corridor was a case of colored chalks sent by Vallin & Flamman; they are used with advantage in teaching design as well as in map-drawing on the ivory slates ruled into small squares, exhibited by L. Luzanne. On the walls were some capital sketches by M. Armengaud of the processes in various trades. These came from the house of Delagrave. The dainty pictures of the *récompenses scolaires* must be a potent weapon in the hands of a skillful teacher.

A large part of the school furniture and apparatus was supplied by the *Syndicat du matériel et du mobilier de l'enseignement*. The desks were made for two each, with backs to the seats; the angles of the wood had been rounded off. The tops of

* A peculiar difficulty in writing of foreign educational systems is the very different meanings applied to cognate terms. Université can not be translated into English; an American graduate is an English undergraduate, while baccalauréat stands for something between matriculation and a B. A. The old English universities are represented by académies.

† In the Paris schools these desks are made in five sizes: very small, for children whose height varies from 1 to 1.10 meters; small, from 1.11 to 1.20 meters; medium, from 1.21 to 1.35 meters; large, from 1.36 to 1.50 meters; very large, from 1.51 meters and upwards.

the desks had black square decimeters let into them; inside were boxes with letters and the figures on separate slips. In the corner was a small library sent by the minister. Fascicule No. 21 contains a list of suitable books.

An excellent set of small maps, made to hang on two pegs and very clearly painted, was exhibited by M. Armand Colin. Each map was duplicated in outline on the back, and the whole series could be packed in a medium-sized box. A small cabinet—40,000 such are said to have been sent out by the firm of Deyrolle—contained a collection for teaching object lessons. In the school there were several good examples of the *nécessaire métrique*, comprising a rough set of the weights and measures, with cards showing the various money units; a 5-franc piece weighs 25 grammes and 10 centimes 10 grammes, etc. How many secondary schools in England are provided with weights and measures? My own experience is that the French use of Latin and Greek prefixes affords little help to an English boy; he will not confuse a decimeter and a decameter after he has had pieces of string of those lengths given him and compared them practically with a meter.

Although drawing seemed to be prominent enough in the basement, the two upstairs rooms, mainly occupied by Hachette, were full of copies and models; one of a plaster tiger in relief had the skeleton shown in the left hand corner. A glass case contained the *Collection des principaux ouvrages pédagogiques français et étrangers*. Some artistic examples of *Imagerie et bons points scolaires* were shown by M. Quantin.

The renaissance of geographic studies in France has not forgotten the primary school. There was no lack of maps, globes, atlases, etc.; they seemed at last to be fully alive to the fact that the child does not want to know the name of every insignificant town, mountain, or river in the world. The mountain ranges no longer look like centipedes stuck on the map; the problem, however, of bringing the representation of the height into the right relation with the breadth can hardly be said to have been solved yet. A physical map of France by M. Levasseur was remarkably fine. Outside the school under a shed sets of gymnastic apparatus were shown by M. Frété: A "polygymnase," capable of being set up in an ordinary room without any fixings, was sent by M. Laisné, the inspector of gymnastics at Paris.

If the country schools in France are not properly equipped, the fault certainly does not lie with the business houses.

Interesting lessons were given three times a week to a class of deaf children by M. A. Grosselin, the founder in 1886 of the *Société pour l'instruction et la protection des sourds-muets*. To make out speech simply by the movement of the lips is like trying to read almost illegible writing; to lighten the strain M. Gosselin invented his "phonimimique," in which the hand aids the lips.

To sum up, then, we may say that the pedagogic center of gravity in Europe has shifted from Germany to France. By bringing education as a whole under the control of the State and making it an integral and independent department in the government; by training the teacher and by making his promotion depend on professional service and skill; by avoiding the iniquitous inequality of incomes as it exists in England between the head master and the assistants, and thus making life more possible for the rank and file of the profession; by freeing the teacher from tutelage and awakening in him a sense of the national importance of his task; by adopting the democratic principle that the governed should choose their own representatives; by courageously eliminating from the school the differences of religious bodies and by putting therein the morality common to them all; by her readiness generously in showing strangers the best she has, so that education, like science, may be a generous donor to all without distinction of nationality, France has earned the gratitude of all advanced minds in the civilized world.*

* In the Frenchman conscience is applied to intellect as well as to morals.

The French have the greatest quickness for assimilation of new ideas and acting on them. The nation is great by its mass and not by the greatness of its great men. The national character is far more expressed in France than in any other nation in Europe.

The school is the connecting link between private and public life; the parent expects aid in making the child an honest man, able to fight the battle of life, and the State a good citizen, is interested in the production of each.

Profound gratitude to the French nation should be felt by enterprising spirits in other lands, who, saturated with the belief of Pestalozzi that the regeneration of man can come only from the inside, that the spiritual hegemony of the world of youth is passing into the hands of the teacher, are able, when their plans are stigmatized as Utopian, to point to them as accomplished facts in France.

SECTION XIII.—FOREIGN COUNTRIES.

ALGIERS.

The magnificent wall and relief maps of Algiers at once attracted attention, and the promise of an important school exhibition was not belied. The principles and methods being absolutely the same as in France, there is little to add. Although some of the reports sent up by the masters contained excellent hints for teaching the natives, the presence in the exercise books of dictations on the out-of-the-way irregular verbs, on the past participles, maps of Holland, etc., showed either a lack of tact or the pressure of official programmes.

The country possesses 103 schools for natives, 154 maternal and 958 primary schools; in the latter there are 46,109 French children, 11,819 Jews, 34,061 foreigners, and 10,415 Mussulmans, the latter comprising close on 1,000 girls; practically all the children of school age attend. In the higher schools there are 215 natives.

A touch of local color was given by a model of a room with a copy of the Koran on a low stand on the floor and by the picture of a master turning up a boy to cane him on the soles.

ARGENTINE REPUBLIC.

The control of education is very largely in the hands of the Government. Although the various States in the federal union are jealous of their independence, they have received since 1871 a subvention from the state. Up till 1870 the efforts of the Government had been directed almost entirely to secondary and higher education.

In 1881 three-fifths of the children who ought to have been in school were not there. The knowledge of the large arrears to be made up has resulted in a phenomenal activity and splendor if we can form any accurate idea of the state of affairs from the photographic album exhibited. The school buildings are palatial; it needs a photograph to make us believe in the reality of the Teachers' Museum; it looks like the dream of some Utopian pedagogue.

A powerful impulsion towards education was given by President Sarmiento. Taking to heart the belief of Horace Mann that, unless a man's words and works made for the education of the people, he was not nor could he be an American statesman, he was the first to give subsidies to the provinces for primary education. He founded training colleges and popular libraries, reformed the school programmes, etc., with the result that in 1889 the Republic contained 3,227 schools, with 254,608 children and 7,332 teachers, while spending close on £200,000.

The control of primary education lies in the hands of an educational council of five members, with very large powers.

Buenos Ayres with its 116 schools has naturally taken the lead in the educational movement. The state has made a six years' course of education compulsory, free, and unsectarian. Morals and civic duties are taught, but confessional instruction is forbidden. Five per cent of the revenues, as well as the property of those who die intestate, maintain the 34 training colleges and the state schools, which now number close on a thousand.

Argentine pedagogy contains a system colored by French and North American influence on a Spanish ground, with a streak or two of German in its composition.

The surest sign of present wisdom and future success is the great importance laid on the training college. The first founded is not yet thirty years old, and there are now in the whole Republic 34. Each province has one for men and another for women, all of them being provided with practicing schools. Of these three are restricted to train an élite for the profession while the others devote their attention exclusively to training the ordinary school teacher. All are provided with practicing schools and some kindergartens, the latter being in the hands of women teachers from the United States, who have introduced Froebellian methods. These training colleges cost the state more than £50,000 a year. Imagine an English town of 30,000 inhabitants with a training college of 830 students! To enter one of the sixteen institutions for secondary education, that depend directly on the government, the child must have passed six years in a primary school. At the end of another period of the same length the student acquires the right to enter the university. The same difficulty occurs here as elsewhere. Teachers in the higher branches are untrained. What nation will be the first to thoroughly organize the training of secondary and higher teachers?

The two universities of Buenos Ayres and Cordova are entirely in the hands of the government. The number of students in both in 1888 was 759.

The 169 exhibitors were all catalogued under higher education. The major part was of course sent by the National Council of Education, but the General Council of Education for the province of Buenos Ayres had also forwarded its laws, regulations, etc.

Among the books were: M. R. Garcia, *Étude sur l'éducation aux États-Unis*; J. M. Garro, *Étude historique sur l'Université de Cordoba*; J. Lopez, *L'instruction publique en Russie et en Allemagne*; J. M. Torres, *Cours de pédagogie*. To these we may now add: J. B. Zubiaur, *Quelques mots sur l'instruction publique et privée dans la République Argentine*, as well as *República Argentina, Educacion comun en la capital, provincias y territorios nacionales. Año 1888* (published in 1889).

BELGIUM.

Although the government had refused its support, the exhibition contained many things worthy of study. Here as elsewhere handicraft and industrial training were to the front, coupled, of course, with an anxious care for drawing and design. The struggle for the commercial hegemony of the world is keen.

Antwerp sent exhibits from its commercial institute and its school for the deaf and dumb. The former grants diplomas. According to a statistical table, its pupils afterward range from commercial travelers to consuls.

The industrial schools in the various parts of the country give a training for almost every trade. Tailoring, printing, watchmaking, and lace-making at Brussels, brewing at Ghent, with a complete equipment of professors and laboratories for chemistry, bacteriology, and microscopy; dyeing at Verviers, etc.

Among the books we noticed the *Revue pédagogique belge*, *Annales de l'Université de Bruxelles*, *Histoire de la pédagogie*, by E. Damseaux.

Belgium seems to desire a solid and practical training for its inhabitants without laying any great stress on the formation of an universal artistic taste.

How far is the reactionary party in Belgium responsible for the poverty of the exhibits?*

The question of trade-training in Belgium was fully treated in a report due to M. Bouvy, of Liège. Although a large number of apprenticeship schools for weaving were opened in 1842 in the leading manufacturing towns they did not thrive, and

*Rapport triennal sur la situation de l'instruction primaire en Belgique, présenté aux Chambres législatives le 28 mars 1889; 15^e période triennale, 1885-'86-'87. État actuel de l'enseignement supérieur des lettres en Belgique d'après quelques brochures récentes. E. Stropeno in *Rev. internat.*, xvii, pp. 600-609.

since 1857 no new one has been started. Now it is proposed to reorganize them with a programme somewhat less developed than that of the ordinary professional schools.

At Tournay the municipality has organized a professional school on a peculiar plan. The workshops for wood, with machinery of various kinds, are let out to contractors, who have to supply material, lighting, tools, and salaries, while they make what profit they can. In the contracts the number of apprentices to be employed, the wages, and the length of the working day are all specified. The contractor receives 1,500 francs a year, with 500 francs for tools, etc. The apprentices are bound for five years. For the first year they receive no pay, afterwards for a day of $8\frac{1}{2}$ hours the pay rises every quarter, starting at 10 centimes and touching finally 1 franc 50 centimes. At Brussels, in 1880, the master tailors started a school to compete with the houses for ready-made garments and to improve the work done by hand. The school contains four classes with eight pupils in each; they are supposed to serve for four years. At the beginning of the second year a wage of 2 francs a week is paid; bonuses that can be claimed only on the completion of the full time have reduced the number of premature defections to 10 per cent. Twice a week lessons are given on morals, French, history, geography, linear drawing, and bookkeeping. Sufficient tailoring work, paid for at the prices current in the best houses, is supplied by the committee of management.

A. Delattre (Mons) exhibited a fine model of the brain, with the centers denoted by little brass rods leading to the side, with the name. Aqueduc de Silvius was shown done in two portions.

There is training for the teachers of manual work at the École Normale de l'État pour Instituteurs Primaires à Mons. Great weight is attached to designing.

DENMARK.

On entering the Danish court the eye was immediately caught by a large number of visiting cards. Hardly any of the objects exhibited had failed to find a purchaser from some part or other of the world. Certainly the exquisite taste displayed in the application of art to industry deserved this eloquent token of success. The furniture, jewelry, pottery, terra cotta and iron work showed a rare combination of wealth and elegance.

The technical school for women, founded at Copenhagen in 1875, must count for something in this success. The other exhibits were too scanty to allow of the formation of any adequate idea of the present state of education in Denmark.

A fine map by Petersen was sent by the publisher, Herr Rønn, but the good effect was rather spoilt by the juxtaposition of some highly colored and theatrical scenes from history. Those who have visited Copenhagen know how rich the museums are in material for the study of ethnography, but the stone, bronze, and iron implements, together with the conjectural life-size representation of a family in the bronze age were shown in the history of work in the palace of the liberal arts.

For the teacher the most interesting exhibit was an album designed by Herr Mikkelsen.* Denmark has been the last of the Scandinavian countries to accept the impulsion of Finland toward handicraft.

Ten years after the Nüäs school was founded Herr Mikkelsen in 1883 opened the first Danish slöjd school. In 1885 he moved to Copenhagen and started a training college, with the curious result that handicraft is now compulsory in Denmark while it is optional in Sweden.

The special feature of Herr Mikkelsen's method is that he attempts to teach handicraft to a class running up to forty boys. A model is shown and explained, the dimensions given, and a rough copy made of a drawing of the model. Boys that finish

* Le slöjd danois, système Mikkelsen. Autografier udførte. Philipson & Co. Copenhagen.

early are given a "parallel number," which affords a slightly more difficult exercise.

Great emphasis is laid on the correct use of the tools, beginning with the saw, the American saw, and the knife, etc. For their proper use a special set of "application exercises" have been drawn up. Care is taken that the exercises shall keep the child in an attitude physiologically correct. Wood alone is employed. Herr Mikkelsen likes *Fielstøjderi* as little as Herr Salomon.

In our present condition of affairs, the attempt, however unpromising it may appear at first sight, to teach handicraft in class must enlist our sympathies. A long account of his system was given by Herr Mikkelsen* in 1888 to a conference at Munich. It leaves the impression of being rather a preparatory school for future carpenters than an integral part of education.

From a note on the training colleges (Rev. pédagog., XIV, p. 240) we learn that Denmark possesses four of them, all for men. Three-fourths of the directors are clergy. The curriculum contains neither modern languages nor handicraft, and the pedagogy is limited to four hours a week in the student's third year. As in England they are rather continuation schools than training colleges.

ENGLAND AND SPAIN.

To pass from the French exhibits, so full of suggestions, so eloquent of the sacrifices cheerfully made for the cause of education, into the two rooms allotted to Spain and England was a melancholy and painful anticlimax. From the former came a case of books, chiefly the publications of learned societies. A *Historia de las Universidades en España* by *La Fuente*, caught my attention. This, perhaps, is not to be wondered at when we learn that out of 15,921 schoolmasters only 2,213 receive more than 825 francs a year. (See in the *Revue internationale*, Vol. XVIII, pp. 53-72, an article by M. M. Harbulot on *L'enseignement public en Espagne d'après des documents officiels*.)

In the latter education seemed to have resulted mainly in a fine set of platinotypes. Eighteen English publishers were represented by Galignani, but their books were of general interest.

The sobriety and sincerity of English art, the combination of elegance and richness, came out clearly.

The industrial exhibits were powerless to obliterate the memory of our culpable apathy. Surely among the 380,000 Englishmen who visited Paris some few would have been interested in a conspectus of English education. With what results have we listened to Matthew Arnold's incessant cry of "Organize your secondary education?" How much lost ground have we made up in the matter of primary education? May we be justly proud of our girls' schools?

In a country where the confusion between the separate offices of the teacher, the clergyman, the scholar, and the man of science is complete and almost universal it is perhaps somewhat early to look for that generally diffused pedagogic sense, the first requisite for a fruitful organization of education. Unwilling to believe that English education was wholly unrepresented, I commenced to hunt in other parts of the exhibition, with the result that I found in the anthropological section, "Catalogue of ethnological exhibits prepared for the Paris Exposition of 1889, but not exhibited owing to the orders of the secretary of state for India." Perhaps it will be best to follow the organizing committee and to leave such a statement in its naked eloquence. At last, however, right away, at the other end of the grounds, in the *Economie sociale*, 82 annual reports of the British and Foreign School Society were discovered with the Ancient Order of Foresters, while plans of the London sewers and Holborn Viaduct were mixed up with some specimens of wood work from the London school board. Surely something more than this, and an annual report, could have been obtained purely by volunteer efforts from their 400 schools. Economy is

* VIII Deutscher Congress für erziehliche Knaben-Handarbeit zu München am 22 und 23 September, 1888. (Görlitz, Vierling.) The IX and X Congresses have been held at Hamburg and Strasburg.

not all gain. With the publications of the National Temperance League was a large portfolio containing plans of the Technical College of the City and Guilds of London, but nothing was sent by the students or professors.

The other exhibits—it is possible in this case to be complete—comprised E. C. Robin's excellent book on Technical School and College Building; photographs of the Sanatorium of King Edward VI School at Sherborne; of the Merchant Venturers' School at Bristol; Reports of the Society for Prevention of Blindness, Highgate; of the school boards of Sheffield and Nottingham; a model of the Oakley Board School, Birmingham, built to accommodate 1,080 children; plans of the Blackburn Technical School, and of the Liverpool School for Cookery, and finally an account of the Ladies' College at Cheltenham.

FINLAND.

We enter the Finnish pavilion with considerable curiosity. The student of English knows that he has to seek for the most primitive, we might almost say the fossil forms of his native language, in the large number of words borrowed by the Finns about the beginning of our present era from the neighboring tribes of the primitive Germanic nation; to the student of philology the epic of *Kalewala* is interesting in its attempt to account for the origin of language, while the educationalist honors Finland as the home of the movement for handicraft in schools.

We seem to be taken back to the times of the Renaissance scholars when we learn that Un Cygnaeus (1810-1888) is a Latinized form of the Finnish Joutseno; like a true disciple of Pestalozzi, his bent toward education came from a profound sympathy with the life of the poor. In 1856 the Czar Alexander visited his duchy and promised the Finns a reform of their school system. Cygnaeus published his *Strödda Taubar* and laid down the main lines on which the proclamation of 1858 was based. Handicraft in the school and the proper training of teachers, both men and women, are its essential points. Cygnaeus was sent on a long pedagogic tour, but apparently he did not think it worth while to visit France or England. He returned to Finland with a clear conception of the fundamental difference between working for a trade and handicraft as a means of formal education. In 1863 the first seminary (or training college) was opened at *Jyväskylä*. On May 11, 1866, the organization now in force was definitely settled. Since then primaries have been founded at Ekenäs, Nykarleby and Sordavala. All four were represented at the exhibition, and with some thirty "folk-schools," for which they train the teachers, gave an adequate picture of primary education in Finland.

Although the girls' work from many of the schools was evidently intended for "Sunday best," the one at Abo was not afraid of sending specimens of stockings, shirts, and jerseys, meant for rough, every-day wear. Many of the exhibits had cards stating the age and time at school of the pupils.

As in France, handicraft is practiced both in wood and metal. The boys spend five or six hours a week on it with a purely pedagogic aim. An accurate eye and a dexterous hand are enough to demand from the first stage in education. The metal work from the four seminaries was in copper, iron, and steel, comprising a large number of different tools.

The objects in wood are made from a hard birch and consist mainly of household utensils.

To judge by the number of exhibits calligraphy and shorthand are highly honored in Finland. Higher education was mainly represented by the transactions of a large number of learned societies. The studies from the School of Art at Helsingfors were frankly realistic, being taken almost entirely from the everyday life of the poorer classes. The Central School for Art applied to Industry was founded in 1870, and is supported by private donations.

GUATEMALA.

Although Guatemala does not yet seem, like the South American States, to have taken the first step forward in education by freeing it from the control of the clergy,

some good results may be expected from the appointment, by a decree of 1887, of a director for primary education in each of the departments. Among other things it is his duty to visit once a month all the schools, public and private, in his district; on the 1st of December in each year he has to meet his fellow directors in the capital. These constitute "a general council of popular instruction."

HOLLAND.

The most important exhibits came from Amsterdam. The Institute for Blind Children under the direction of J. H. Meyer sent a number of English, French, German, and Dutch books beautifully printed.

The weight laid on art is fully shown by the exhibits from the Normal School for Drawing at Amsterdam and from the Museum and Professional School for Industrial Art at Haarlem; the latter is specially designed to train students in architecture, sculpture, painting, engraving and art needlework. The Haarlem school was founded in 1883; it is interesting to note how rapidly and surely institutions grow when they correspond to some real need.

The "Professional School for Trades" at Leyden sent work in wood and iron and models of houses. From the same town came the only Dutch exhibit for primary education. The normal school, under Mlle. Hardenberg, trains mistresses for the one hundred maternal schools of Holland and the Dutch Indies. To judge from the photographs of the building and the monthly journal edited by the directress, an earnest endeavor is made to keep the pedagogic treatment of the very first stages of school life on a high level. Some of the articles made by the students seemed a little lacking in artistic finish. The sole exhibit for secondary education, the wooden models of the mathematical solids, by I. Noest, of Leyden, wore a forlorn and solitary air.

The natural tendency of Protestantism to break up into sects is forcibly illustrated by the religious history of Holland. The sects had become so numerous that a pastor at the end of the eighteenth century suggested the formation of a "neutral school." In 1806 "neutrality" became the law in Holland, the first country in Europe to adopt what the French now call "*la laïcité de l'enseignement*." The logical base of compulsion and gratuity, however, has never been accepted by Holland, and even the neutrality has been swept away by the law of December 6, 1889.* Since, however, this retrograde movement is due to an unnatural coalition of Protestants and Ultramontanes, it is probably only transitory. Happening to be at Antwerp when the same movement had begun to carry the Belgian elections, I was very much struck with the huge numbers of placards, pamphlets, and books displayed by the Liberal party. I spent a whole day visiting the various booksellers trying in vain to get from the other side some expression of opinion, some justification for the coming changes. The children of light seem at times to develop a great fondness for working in the dark.

JAPAN.

On entering the Japanese court the eye was at once caught by a large sheet covered with the characters, eloquent to the phonetically-trained student, of A. M. Bell's "visible speech." The fifty sounds in Japanese were represented in this alphabet for the use of the deaf-mutes.

The enlightened direction given by the Government to education was obvious from the exhibits of the minister; in 1887 close on 3,100,000 francs were spent. The Japan *Musée pédagogique* receives a large subvention; all apparatus, etc., designed for school use is first tested there. An account of the museum is published by the department of education, as well as a small book on the "Outlines of the Modern Education in Japan."

* La nouvelle loi hollandaise sur l'instruction primaire, in the Rev. pédag., xvi, p. 403.

The publications sent by the students showed a high standard of work. The languages in which they were written—English, French, and German—were remarkably correct; occasionally, however, the strange use of a preposition betrayed the foreign hand.

Among the "instructive toys" to be used in primary education were some droll dolls, made of paper, with painted faces.

Books, music, commercial correspondence, and models were the leading exhibits in secondary, while for higher education there was shown a collection of laws, photographs, transactions, and documents on seismology; the latter called to mind the remarkable model at the South Kensington Museum, made by a Japanese to represent the path of a particle during an earthquake. In 1882 two educational societies amalgamated under the name of the *Dai-nihon Kyōiku Kwai*, at 21 Hitotsubashi-Toricho, Kanda-Ku, Tokyo. In 1884 the Prince Imperial was made president and the number of members rose to 5,000. Seven sections keep watch over the whole education of the country in all its grades. The society publishes a journal.*

MEXICO.

No report of the Mexican exhibit.

NORWAY.

Two exhibitors in classes 7 and 8 and one in class 6 represented the pedagogy of Norway. The method for teaching drawing published by A. Petersen, of Christiania, and used in the primary schools, as well as the zoological diagrams of P. Dybdhal, of Trondhjem merited better support. Great changes in the "common schools" were introduced by a law passed in June, 1889, by the Liberal party in the face of strong opposition from the Conservatives.†

PARAGUAY.

Although in 1824 Alexander von Humboldt stated that all the inhabitants of Paraguay could read and write, the exhibition contained nothing specially educational.

Attendance at school was made compulsory in 1861, and a "supreme law of education" was passed in 1887. Ten per cent of the money realized by the sale of public lands and forests, the property of those who die intestate, 12 per cent on public auctions, fines, and a poll tax of a piaster on every man, supply the funds for education; 800,000 piasters were spent in 1887. The 138 public primary schools give instruction to 15,000 scholars.

RUSSIA.

In the official catalogue there are only eight entries for Russia, and of these the exhibition of books sent by Mme. Altschevsky from the Sunday school at Kharkoff was alone of any importance.

Although under Catherine II primary schools were opened in St. Petersburg in 1781, and a training college was active from 1786 to 1801, education has remained the privilege of the rich for the greater part of this century.

In the sixties, after the liberation of the serfs (February 19, 1861), a widespread movement for the better education of the poor passed through Russian society. Schools were opened and courses of instruction for adults started. However, the Government became alarmed and the work was stopped by closing the private schools. Mme. Altschevsky alone weathered the storm. Here a voluntary staff of 60 women teachers give elementary instruction to between 300 and 400 people, varying in age from 10 to 45. The school is open every Sunday for nine months in the year. The

* Further details may be found in *Revue internationale de l'enseignement*, November, 1889.

† Lois du 26 juin 1889 sur l'instruction primaire. Traduction française par Blix. Christiania.

chief instrument of culture is the reader, "What shall we give the poor to read?" The answer given by the novelist Tolstoi, and the society founded by him, the Intermediary (*i. e.*, between the rich and the poor), was a series of tales with a moral and religious tendency, written with a "goody" aim. The usual sterility due to the efforts of one class of society to play providence to another without any adequate knowledge of its wants followed until Mr. Sytine, a rich Moscow publisher of popular books, hit on a happy trick. The Russian peasant, instead of welcoming the new reading offered him, maintained a steady demand for a few old favorites, mainly travestied translations of the immoral parts of foreign books. Retaining the old titles, Mr. Sytine gradually changed the contents. Of this transformed literature what was most in demand, the moral stories written *ad hoc* or the literature, native and foreign, gradually added to the series? The answer obtained by Mme. Altchevsky by a direct appeal to experiment is important. She read King Lear to her scholars in three different forms. Over the first they yawned. It was a prose translation interspersed with moral reflections. Next the story transplanted into Russian peasant life, *The old man Nikita and his three daughters*, became a favorite of the lending library. Finally a faithful verse translation was given and understood from end to end.

"Nobody missed the subtlety and bitterness of the fool's gibes. The lamentations of King Lear in the storm were accompanied by half-checked sobs, and when the reading was done a heavy silence hung for several minutes over the listeners."

In 1889 a remarkable volume was published by Mme. Altschevsky and her fellow-workers. It contains a faithful transcript of the remarks made by the illiterate audience, to whom some 2,500 works were read.*

SAN SALVADOR.

Although the smallest of the Republics of Central America, the inhabitants of San Salvador are better off and number more to the square kilometer than their neighbors.

In 1886 there were 602 schools educating 14,000 boys and 6,000 girls; the number, of children who ought to be at school is 62,000. As in Chile, the Government offers prizes for works on education. In 1883 Signor Galondo's "Elements of Pedagogy" was adjudged the prize.

SPAIN.

(See England.)

SWITZERLAND.

Switzerland was one of the few countries officially represented at the Exhibition. Although political considerations perhaps made the Confederation accept the French invitation at once in 1887, a shrewd sense of the industrial importance of the Exhibition was not lacking.

Liberal aid by the Government, the cantons, and the leading towns, private enterprise was enabled to display its productions to the best advantage, and perhaps show a better front in the redoubtable competition with England and America in the silk, cotton, and watch industries.

After France, Switzerland was the most completely represented in the Exhibition. Its products were everywhere. Pedagogy, was lodged in the *Groupes divers étrangers*, and consisted mainly of a fairly complete exhibition of primary and professional instruction.

Although four rooms had been acquired by the Swiss through an early adhesion, the space was inadequate, the first room especially being overcrowded and badly

* See an interesting article on *L'éducation des classes populaires en Russie*, by E. Durand-Gréville in the *Rev. péd.*, December, 1889.

lighted. A large book was ready for the signature of Swiss visitors, while a board gave the names of places where they might find one another in the evening.

In many of the cantons a quarter of the whole budget is devoted to education, the greater part of the money falling to gratuitous and compulsory primary schools.

This serious, solid interest was reflected in the exhibition; it was possible to obtain a fairly complete conspectus of primary and professional instruction; native critics ascribe to the latter much of the well-known Swiss skill in the various industries.

The Pedagogic Museum at Zürich sent busts of Pestalozzi, Fellenberg, and Girard, and a number of photographs of leading educationalists.

An apparatus for teaching fractions was exhibited by F. Maillard.* Two uprights are connected by sets of parallel wire rods, one lying above and behind the other; pieces of wood painted black on one side and white on the other, and each, a certain fraction of the whole distance between the uprights, can slide along the rods, the white side being shown by turning the piece over till it rests on the upper rod.

Geneva may well be proud of its art school; the work sent is as remarkable in variety as in taste, and included Formvollendung, modeling, Kunstguss, Stanzarbeit und Ciselirung, Fayence, Mosaiken und Wandmalereien. The students have made a remarkable chimney piece in the Renaissance style for the Bundespalast at Bern. Although lacking the brilliancy of the Geneva school, the Technikum of Winterthur provides a solid and useful training in architecture and designing. The art and needlework school at Zürich sends some good sewing work and many elegant designs for monograms.

From the exhibition of the Zürich publishers, Orell Füssli & Co., we pick out the *Sammlung neuer Gesetze und Verordnungen*, by C. Grob, the secretary of the educational department. To him are also due the statistical facts embodied in a large atlas by R. Hinder. The town of Basel spends the most on its schools; the number of children per teacher ranges from 31 to 82.

A model exhibited by Prof. Aeby, of Bern, at the first glance looked as though a kitten had been allowed to play with red and blue balls of twine; however, the model turned out to be a "phantom" of the brain and spinal marrow. The sensor and motor nerves were denoted by red and blue wires, and the ganglia by small knobs. An interesting contrast was afforded by another model in the Belgium section, due to A. Delattre, of Mons. A vertical section of the head was made and the two halves turned outwards, right and left; at the sides were small bone plates, each with the name of some part of the brain; a thin brass wire fixed in the plate and ending in a flattened tongue ran to the part named.

Admirable desks were shown by A. Mauchain, Genève.

Throughout there was in the space devoted to Switzerland a large amount of material for teaching.

A tourist can not be long in Switzerland without being struck by the beauty and accuracy of the native maps. The variety and complexity of the surface of the country makes cartographical skill a necessity.

Although Switzerland possesses 544 kindergartens, in which 611 women teachers look after 20,014 young children, only Geneva and St. Gall sent exhibits. If we may judge of the life in their infant schools from an album of photographs, the meaning of the word kindergarten is still conscious of its second half. The gradual rise and development of the objects sent by St. Gall was made amply clear; they were worked out quite in the spirit of Froebel. Geneva seemed to have yielded somewhat to the ever present tendency of intruding the higher branches of education on the lower; the children are received at the age of 3 and kept till they are 6, when their work bears the stamp of a preparatory school rather than of a kindergarten. The difficulty of coupling schools is doubtless great, but the necessary adjustments must not

* Tableau démonstratif de la théorie des fractions, Hofstetter. Zürich.

be made at the expense of the youngest; better turn the lowest class in a primary school into a kindergarten than make the kindergarten a regular school.

"Our agriculture and our industries," said Fellenberg, "must draw their chief support from the primary schools." His influence on them is reflected in the attention paid to handicraft. The visitor could not but notice that the care and brightness with which the first elements of science and the natural history of the country are made to attract the eye. Illustrated primers, maps, collections of the fauna and flora, make a knowledge of the country easy and attractive. The attention paid to handicraft may be inferred from the exhibits sent from Hofwyl and Basel.

Austria has recently devoted great attention to school gardens; without counting Hungary, she has at present close on 8,000 of them connected with public or private schools; practical instruction is given in growing vegetables and fruit trees and in rearing bees. These schools were visited recently by Herr Zollinger and the results of his mission were embodied in a fine atlas. There was a school garden running round the back of the panorama *Tout-Paris*, near the *École modèle*, and containing maize, grasses, fruit trees, and a kitchen garden; it did not look very gay.

A magnificent set of photographs by R. Guter, of Zurich, was lodged without much apparent propriety in the agricultural section on the Quai d'Orsay.

Switzerland used to be famous for its needlework, and the beauty of the historic specimens exhibited made one almost regret the invention of the sewing machine. It has, however, been pressed into good service by inherited artistic skill. Silk was effectively employed in many of the fancy articles.

Superior education in Switzerland is connected with the universities of Basel, Geneva, Bern, and Zurich. There is also a polytechnic at Zurich.

TUNIS.

The remarkable development of education in Tunis since France established her protectorate shows clearly that so far as the official action of the government is concerned, the missionary has been replaced by the schoolmaster. In 1883 there were 150 natives studying French; in two years the number had risen to 474; but in 1889 it touched 1,765. The schools rose from 24, in 1883, to 67, in 1889, with 9,494 pupils. Outside Tunis 28 other places are provided with schools.

A chair for Arabic was founded in 1884. The students, mainly public officials, numbered 120 in the year 1888-'89.

Formerly instruction was given in the great Mosque, and consisted almost entirely in learning the Koran by rote. The higher students, desirous of entering public service, did some grammar, law, logic, and literature, and occasionally arithmetic, geography, and history.

There were several cases of work sent by pupils and teachers. The chief part of the exhibition was sent by the 100 students of the training college at Alaoui. In the practicing school attached there are 200 children.

UNITED STATES.

A foreigner who, after seeking in vain for anything educational from England, came to the conclusion that the English-speaking races cared nothing for pedagogy, would hardly be likely to change his opinion even after seeing the American display. Here, too, he would have been curious to know why photography was so much honored. Although Congress voted 1,250,000 francs and thirty-eight States appointed commissioners with Gen. Franklin as their head; although 1,500 exhibitors had a space of 8,000 square meters allotted to them, the number of entries in the official catalogue under "education" amounted to no more than 17. This was hardly a generous return for the fine display made by France at the New Orleans Exhibition, which, as Dr. Harris said, "was worth a journey from any part of the United States." Consigned to the Desaix gallery the exhibits were still more lost to view.

The display consisted mainly of books: The publications of the United States Bureau of Education, of the Johns Hopkins University, Dr. Barnard's reprints of educational books, D. Murray's handsome set of volumes of the Historical and Statistical Record of the University of the State of New York (1885). Many other books were stowed away under the tables.

LIST OF AWARDS, UNITED STATES.*

CLASS VIII.—HIGHER INSTRUCTION.

Grand prizes.

Bureau of Education, Washington.
 Bureau of Ethnography, Washington.
 U. S. Geological Survey, Washington.
 War Department, Washington.
 Rensselaer Polytechnic Institute, Troy, N. Y.
 Smithsonian Institution, Washington.
 Johns Hopkins University, Baltimore.
 University of the State of New York.

Gold medals.

Cornell University, Ithaca, N. Y.
 E. D. Cope.
 U. S. Naval Academy.
 American Museum of Natural History, New York.
 University of Virginia.

Silver medals.

Amherst College.
 College of Physicians and Surgeons, Baltimore.
 Eclectic Medical College, Cincinnati.
 College of Pharmacy, Massachusetts.
 College of Pharmacy, Philadelphia.
 New York Polyclinic.
 American School at Athens.
 American Antiquarian Society, Worcester, Mass.
 Historical Society of Virginia.
 Washington and Lee University, Virginia.
 Princeton College, New Jersey.
 St. John's College, Annapolis, Md.

Honorable mention.

Library of the Chicago Law Institute.
 Public Library of Omaha.
 Public Library of St. Louis.
 Public Library of Woburn, Mass.
 Brown University, Providence, R. I.
 Library of the Mercantile Society, New York.
 Wellesley College, Massachusetts.
 Dartmouth College, New Hampshire.
 Lafayette College, Easton, Pa.
 Norman William Public Library, Woodstock.
 Mt. Holyoke Female Seminary, Massachusetts.
 American Numismatic and Archeological Society, New York.

* This list is incomplete.

Historical Society of Buffalo.
 Historical Society of New Haven.
 St. Stephen's College, Annandale, N. Y.
 Society for the Collegiate Instruction of Women, Cambridge, Mass.
 De Pauw University, Indiana.
 University of Kentucky.

CLASS VII.—SECONDARY INSTRUCTION.

Gold medals.

Department of Public Instruction, State of Iowa.
 Department of Public Instruction, State of Massachusetts.
 Department of Public Instruction, State of California.
 Department of Public Instruction, State of Michigan.
 Department of Public Instruction, State of Wisconsin.
 Galveston public schools.
 Boston public schools.
 Pittsburg public schools.

Silver medals.

Ginn & Co.
 D. C. Heath & Co.
 Lake Erie Female Seminary, Painesville, Ohio.
 Mount Holyoke Female Seminary and College, Massachusetts.
 Ogontz (Pennsylvania) School for Young Ladies.
 St. Stanislaus Commercial College, Bay St. Louis, Miss.

Bronze medals.

Moline (Illinois) public schools.
 Van Norman Institute, New York.
 Coldwater (Michigan) public schools.

Honorable mention.

Carl Betz.
 Dummer Academy, South Byfield, Mass.
 East Florida Seminary, Gainesville, Fla.

CLASSES VI, VII, VIII.—TECHNICAL INSTRUCTION.

Gold medals.

Philadelphia Manual Training School.
 St. Louis Manual Training School.

Silver medal.

Free Evening Industrial School, Boston.

Bronze medal.

Alabama Polytechnic Institute.

URUGUAY.

Although a burst of enthusiasm for education a few years ago did something to improve school matters, the chronic disease of a deficit in the national budget renders real progress impossible.

The inhabitants are gathered from all parts of the world (the Spaniards and Italians being in the majority), but they only amount to three to the square kilometer. To

the plan of traveling master the minister prefers boarding houses even for primary education. The attendance only amounts to 50 per cent of those on the register.

The schools, public, private, and confessional, can accommodate 56,000 children, with a staff of 1,056 men and women teachers.

The pedagogic works of Dr. F. A. Perra, of Montevideo, obtained a gold medal at the Exhibition.

NOTE ON SOUTH AMERICA.

Nothing for Venezuela, Ecuador, Dominican Republic, and Bolivia; very little from Brazil, but very fine photographs of the college Abilio.

Cradled in absolutism and the horrors of the Inquisition, the spectacle of a whole continent emerging from tutelage, and striving through the school to acquire its right position in the world, must attract the benevolent attention of all educators.

PART II.—INTERNATIONAL EDUCATIONAL CONGRESSES, PARIS, JUNE-OCTOBER, 1889.

From June 12 to October 10, 69 official congresses were held at Paris. They were arranged for by 15 committees of 12 members each. The numbers attracted to any particular congress varied from 100 to 1,000, while altogether 20,000 persons are calculated as having attended. The congresses lasted from three to ten days.

Unfortunately, it was impossible to publish all the proceedings as in 1878. Enough money had not been allocated to cover the expense, and the administration determined to print short summary accounts. Even for these, however, all the necessary MSS. were not sent.

Members of the committees were nominated by the minister of commerce and industry, commissaire général of the Exhibition. The congresses were thoroughly cosmopolitan in character.

CHEMISTRY.

The Congress was opened by M. Berthelot. Four sections were at once formed to discuss (1) foods, (2) agricultural chemistry, (3) pharmaceutical products, (4) nomenclature. The reports sent up by the sections were considered in four general meetings of the Congress. The first was chiefly concerned with the methods of detecting adulteration in food; the second with the analysis of different soils, manures, and fodder; the third was of opinion that a proper study of the questions submitted to it could only be undertaken by several commissions. These were appointed for quinquina, opium, pepsin, and analgésine, while the fourth section proposed the formation of a permanent international commission, which the president hoped would bring about a complete unity over the whole world in chemical nomenclature. Further details may be found in the *Bulletin de la Société chimique*.

MATHEMATICS.

The extremely technical nature of the discussions not lending itself to an ordinary report, only the resolutions arrived at by the Congress and a very elaborate scheme for a subject-catalogue of mathematical works have been printed.

The plan of classification sent out beforehand by the *Société mathématique de France* was adopted as a whole, but with many modifications in details.

The chief points in the resolutions adopted by the Congress were:

(1) It is desirable to publish a bibliographical list of works on pure and applied mathematics published between 1800 and 1889, as well as works on the history of mathematics from 1600 to 1889. The titles will be arranged, not according to the names of the authors, but in the logical order of the subjects treated.

(2) A supplement will be published once every ten years.

(3) Works that are intended for students and that do not contain original results will be excluded.

(4) Treatises on applied mathematics will be inserted only in so far as they refer to the progress of pure mathematics.

(5) The Congress adopted the classification proposed by the committee with the modifications adopted at the meetings on July 17 and 18.

The distinguishing feature in this classification is the employment of a rectangle, thus:

L' 3 b a

which means that the work denoted coming in the class L, and thus between K and Q, belongs to "Geometry." Class L comprises "Conics and surfaces of the second degree;" the subclass L' limits it to "conics," while the division 3 puts it under the heading, "Centers, diameters, axes, and asymptotes;" the section b comprises "Theorems of Apollonius, properties of pairs of conjugate diameters, construction of the axes of a conic, two conjugate diameters being given;" and, finally, a denotes the "Theorems of Apollonius."

(10) A permanent commission, consisting of five French and eleven foreign mathematical scholars, was appointed to carry out the above resolutions.

(11) The editors of the mathematical periodicals were requested to coöperate in giving the greatest possible publicity to the resolutions of the Congress and the future decisions of the permanent commission.

PSYCHOLOGY.

Preliminary reports on the nine subjects selected by the organizing committee were sent out at the beginning of July. In the absence of the president, M. Charcot, the Congress was opened on August 6 by M. Ribot. The first congress on physiologic psychology was due, he said, to the belief that the principal and daily task of the science of psychology was the incessant observation of morbid and normal facts; the objective method had taken its place side by side with the introspective method. The study of the nervous system, the point of juncture of physiology and psychology, had been rejuvenated by the experiments and clinical observations on the localization of cerebral activity. Was such a phrase as a psycho-physical laboratory possible fifteen years ago?

It was impossible in a short speech to generalize the movement of ideas in psychology; the object of the Congress was not to draw up an inventory, but to prepare the way for one. Compared with what remains to be done little has been as yet accomplished; we think the physiologic method the right one, and that man's labor, as long as it is confined to the realm of experiment, will never be spent in vain. At the end of the Congress it was agreed to meet again in August, 1892, in England, and after considerable discussion the title was altered to "Congress on Experimental Psychology." M. Ribot was followed by M. Ch. Richet, the general secretary, on the work and aims of the Congress. The members then resolved themselves into four sections: A, *Hallucinations*, with Mr. Sidgwick as president; B, *Hypnotism*, under M. Delboen; C, *Heredity*, under Mr. Galton; D, *Muscular sense*, under Mr. W. James. The discussion was based on the lines laid down by the London Society for Psychical Research. M. Marillier pointed out how small were the results obtained so far, while the statistics were open to considerable error, as the persons who answered the set of questions sent out by the London society noted with care the positive, but neglected the negative answers. M. Pierre Janet drew attention to the difficulty of determining whether the persons interrogated were really of a sound mind. The majority of positive answers were probably sent by persons out of health.

Mr. Myers maintained that we are sure that a thought may be communicated from one person to another. The name of a playing card can be transmitted without the intervention of the ordinary organs of sense.

If A looks steadfastly at a number without saying anything, the subject B will sometimes give the exact number, or very often the digits are put in the wrong or-

der, 53 instead of 35, or A may draw a slight sketch on one side of a screen and B will reproduce it on the other side without hearing the scratching of the pencil or seeing the sketch.

Unfortunately it is not easy to vary experiments and to deduce laws, nor is it desirable to speak of experiments that can not be repealed at pleasure. To get any results requires a large amount of patience.

M. Ch. Richet was of opinion that if mental transmission were possible, even in exceptional cases, it would constitute one of the great discoveries of our time.

M. Ochorowicz asked if the experiments were carried out with greater success on certain days or hours, or when the subject was under certain conditions, and did such cases occur in series. M. Sidgwick replied in the affirmative and then proceeded to criticise the statement that the best results were obtained when the patient was in the hypnotic state. Waking was a mixed and complex condition, indeed it seemed to be a condition, made up of all the others of which a man is capable.

M. Delboeuf had found experiments to run in series of successes and failures. Somnambulistis have a strange power of reckoning time. If it suggested that a certain act should be done in 3,500 minutes it is often performed at the exact time.

At the general meeting photographs of persons in the hypnotic state were shown as well as some animals that had been operated upon. A paper was read by M. Danilewsky on the hypnotism of animals. He had succeeded in hypnotising the crayfish, crab, shrimp, lobster, frog, crocodile, several birds, etc. The mechanism of hypnotism was the same in men and animals, although, of course, much more complicated in the former and the elements must be sought for among the animals.

PHYSICAL TRAINING.

The Congress was formally opened by M. Jules Simon on June 15.

A report was then read by M. Pierre de Coubertin, the general secretary and prime mover in the physical renaissance in France, on physical exercises in the schools of England, America, Australia, and the English colonies. Replies were sent from all parts of the world. Wherever the English settle sports are in high honor. Little mention is made of riding. Gymnastics are more practiced in America than in England. Reference is given to exercises done with apparatus; combined movements although good from the doctor's point of view fail to attract. After this report a long letter from the Rev. J. M. Wilson, the head master of Clifton College, was read.

Athletic Sports.—The running races began on June 10, on the grounds of the Racing Club. There were 375 entries for the fifteen events.

On March 11 there was a paper chase of over 7 miles through the woods of Ville-d'Avray, to Marne, Vancresson, and back by way of the Fausse-Reposes to the Versailles-high road.

On June 14 a display was given at the new circus by delegates from various Swedish gymnastic societies.

The riding competition took place at the Jardin d'Acclimatation on June 6. One hundred and fifty entered from the various higher schools in Paris; they were divided into two classes, the juniors (ages from 10 to 15) and the seniors (over 15).

Special prizes were given for vaulting.

Fencing.—The annual competition between the Paris schools, organized by the Société d'Encouragement de l'Escrime, took place on June 9, six weeks earlier than usual. Next day a new feature was introduced in the competition of the provincial Lycées, and on the 11th the final heats were decided. At the last display M. Fallières, the Minister of Education, M. Gréard, and M. Rabier, the director of secondary education, were present.

M. Jean Macé founded in 1866 the Ligue Française de l'Enseignement. It seeks to give gymnastic and military instruction to children after they leave school till they reach the age of 20. The country districts form the chief sphere of its labors. Its constitution is curious, since the 1,200 various branches are completely au-

tonomous. During the discussions on the law of compulsory attendance at school the league organized an immense petition in its favor, and M. Macé published his charming pamphlet, *Lettre d'un paysan d'Alsace à un sénateur sur l'instruction obligatoire*.

In consequence of a circular letter issued on January 1, 1889, by the league, a preliminary meeting was held in Paris on April 14, and it was decided to hold a Congrès international des œuvres d'instruction populaire par l'initiative privée, with the object (1) of collecting statistics on voluntary educational work in all civilized countries, and (2) to form a common bond between the workers.

The congress took place on the 5th and 6th of August under the presidency of M. Macé, in the Mairie of the 6th arrondissement, the doors of the Trocadéro being closed to it because of the want of official recognition.

Reports on the condition of popular education in nineteen different countries were sent in, and it was decided by acclamation to form a Ligue internationale de l'enseignement populaire par l'initiative privée. A second congress was to meet in the following year at Brussels, under the patronage of the Ligue Belge. This project proved impossible mainly owing to the difficulty of selecting the language for the debates to be held in. Early in May, 1890, a circular letter was sent out in French and eleven foreign languages inviting the individual champions of popular instruction to join the ligue in its "intellectual crusade against ignorance." The annual subscription is 20 francs.*

APPENDIX I.

UNIVERSAL EXPOSITION OF 1889 (PARIS).

List of International Congresses.

Name of Congress.	Date.	President of the committee of organization.
Congrès international: de Sauvetage	June 12-15	M. Lisbonne, rue Saint-Vincent-de Paul, 3.
Exercices physiques dans l'éducation (Pour la propagation des)	June 15-22	M. Jules Simon, place de la Madeleine, 10.
des Architectes	June 17-22	M. Bailly, boulevard Bonne-Nouvelle, 19.
de la Société des gens de lettres	June 17-27	M. Jules Simon, place de la Madeleine, 10.
de la Paix	June 23-30	M. Frédéric Passy, rue Labordère, 8, à Neuilly-sur-Seine.
pour la Protection des œuvres d'arts et des monuments	June 24-29	M. Charles Garnier, boulevard Saint-Germain, 60.
des Habitations à bon marché	June 26-28	M. Siegfried, rond-point des Champs-Élysées, 6.
de Boulangerie	June 28-July 2	M. Cornet, rue Rochechouart, 34.
de l'Intervention des pouvoirs publics dans le contrat de travail	July 1-4	M. Donnat, rue Chardin, 11.
d'Agriculture	July 4-11	M. Méline, Palais-Bourbon.
de l'Intervention des pouvoirs publics dans le prix des denrées	July 5-10	M. Frédéric Passy, rue Labordère, 8, à Neuilly-sur-Seine.
de l'Enseignement technique commercial et industriel	July 8-12	M. Gréard, à la Sorbonne.
des Cercles populaires	July 11-13	M. Siegfried, rond-point des Champs-Élysées, 6.
Féminines (Des œuvres et institutions)	July 12-18	M. Jules Simon, place de la Madeleine, 10.
de la Participation aux bénéfices	July 16-19	M. Charles Robert, rue de la Banque, 15.
de Bibliographie des sciences mathématiques	July 16-26	M. Poincaré, rue Claude-Bernard, 63.
d'Assistance en temps de guerre (Des œuvres)	July 17-20	M. De Vogüé, rue Fabert, 2.
de l'Utilisation des eaux fluviales	July 22-27	M. Guillemain, rue Bellechasse, 55.
de la Propriété artistique	July 25-31	M. Meissonier, boulevard Malesherbes, 131.
d'Assistance publique	July 28-Aug. 4	M. Th. Roussel (Le Dr), rue des Mathurins, 64.

* Ligue internationale de l'enseignement. Premier bulletin, Numéro du 15 Février, 1891. Paris, 14 Rue Jean-Jacques Rousseau.

List of International Congresses—Continued.

Name of Congress.	Date.	President of the committee of organization.
Congrès international—Cont'd.		
Alcoolisme (Pour l'étude des questions relatives à l').	July 29-31	M. Bergeron, boulevard Haussmann, 157.
des Traditions populaires	July 29-Aug. 1	M. Ploix, quai Malaquais, 1.
de Chimie	July 29-Aug. 3	M. Berthelot, rue Mazarine, 3.
Coloniales (Pour l'étude des questions).	July 30-Aug. 3	M. Barbey, rue du Regard, 22.
d'Aéronautique	July 31-Aug. 3	M. Janssen, Observatoire de Meudon (Seine-et-Oise).
Colombophile	July 31-Aug. 3	M. Janssen, Observatoire de Meudon (Seine-et-Oise).
de Thérapeutique	Aug. 1-5	M. Moutard-Martin (Le Dr), boulevard Haussmann, 136.
de la Propriété industrielle	Aug. 3-12	M. Teisserenc de Bort, avenue Marceau, 82.
d'Hygiène et de Démographie ..	Aug. 4-11	M. Brouardel, École de médecine.
de Zoologie	Aug. 5-10	M. Milne-Edwards, rue Cuvier, 57.
de Psychologie physiologique ..	Aug. 5-10	M. Chareot (Le Dr), boulevard Saint Germain, 117.
de Dermatologie et de Syphiligraphie.	Aug. 5-10	M. Hardy (Le Dr), boulevard Malesherbes, 5.
de l'Enseignement secondaire et supérieur.	Aug. 5-10	M. Gréard, à la Sorbonne.
de Médecine mentale	Aug. 5-10	M. Falret (Le Dr), rue du Bac, 114.
des Aveugles (Pour l'amélioration du sort).	Aug. 5-8	M. Martin, boulevard des Invalides, 56.
Géographiques (Des Sciences) ..	Aug. 6-12	M. De Bizemont, boulevard Saint-Germain, 184.
de Photographie	Aug. 6-17	M. Janssen, Observatoire de Meudon (Seine-et-Oise).
de la Propriété foncière (Pour l'étude de la transmission).	Aug. 8-14	M. Duverger, à l'École de droit.
d'Anthropologie criminelle	Aug. 10-17	M. Brouardel, École de médecine.
de Sténographie	Aug. 11-18	M. Grosselin, au Palais-Bourbon.
de l'Enseignement primaire	Aug. 11-19	M. Gréard, à la Sorbonne.
des Sociétés par actions	Aug. 12-19	M. Larombière, rue d'Assas, 16.
de l'Intervention des pouvoirs publics dans l'émigration et l'immigration.	Aug. 12-15	M. Isaac, rue Sainte-Beuve, 7.
d'Horticulture	Aug. 19-21	M. Hardy, rue du Potager, 4, à Versailles.
d'Anthropologie et d'archéologie préhistoriques.	Aug. 19-26	M. De Quatrefages, rue Geoffroy-Saint-Hilaire, 36.
de Médecine légale	Aug. 19-24	M. Brouardel (Le Dr), École de médecine.
des Grains et Farines	Aug. 20-22	M. Cornu, place du Louvre, 6.
d'Homéopathie	Aug. 21-23	M. Léon Simon (Le Dr), rue de la Tour-des-Dames, 5.
de Photographie céleste	Aug. 22-Sept. 3	M. Janssen, Observatoire de Meudon (Seine-et-Oise).
des Électriciens	Aug. 24-31	M. Mascart, rue de l'Université, 176.
des Officiers et sous-officiers de sapeurs-pompiers.	Aug. 27-28	M. Wolff, avenue Bosquet, 13.
Dentaire	Sept. 1-7	M. David (Le Dr), boulevard Saint-Germain, 180.
de Statistique	Sept. 2-6	M. Levasseur, rue Monsieur-le-Prince, 26.
de Prévoyance (Des Institutions).	Sept. 2-7	M. De Malare, rue de Babylone, 68.
de Mines et de la Métallurgie ..	Sept. 2-11	M. Castel, boulevard Raspail, 144.
de Chronométrie	Sept. 7-14	M. De Jonquières, avenue Eugène, 2.
des Sociétés coopératives de consommation.	Sept. 8-12	M. Clavel, rue de Bourgogne, 2.
de Médecine vétérinaire	Sept. 19-24	M. Chauveau, rue Jules-Janin, 10.
des Procédés de construction ..	Sept. 9-14	M. Eiffel, rue Prony, 60.
des Accidents du travail	Sept. 9-14	M. Linder, rue du Luxembourg, 38.
Monétaire	Sept. 11-14	M. Magnin, à la Banque.
d'Otologie et de Laryngologie ..	Sept. 16-21	M. Duplay (Le Dr), rue de Penthièvre, 2.
de Mécanique appliquée	Sept. 18-21	M. Phillips, rue de Marignan, 17.
de Météorologie	Sept. 19-25	M. Renou, Observatoire de Saint-Maur (Seine).
des Travaux maritimes	Sept. 20-25	M. Émile Bernard, avenue du Trocadéro, 43.
du Commerce et de l'Industrie ..	Sept. 22-28	M. Poirrier, rue Lafayette, 105.
du Repos hebdomadaire	Sept. 26-27	M. Léon Say, rue Fresnel, 21.
Ethnographiques (Des Sciences).	Sept. 30-Oct. 10	M. Oppert, rue de Sfax, 2.
d'Hydrologie et de Climatologie ..	Oct. 3-10	M. Renou, Observatoire de Saint-Maur (Seine).

APPENDIX II.

EDUCATIONAL MEMOIRS AND BULLETINS PUBLISHED BY THE MUSÉE PÉDAGOGIQUE.

FIRST SERIES.

NOTE.—A series of short articles by H. Durand giving the contents and aim of the fascicules may be found in the *Revue pédagogique*.

Fascicule 1-40, October, 1887; 41-64, April, 1890; 65-78, May, 1890; 79-96, June, 1890.

Fascicule 1. Le projet de loi sur l'organisation de l'enseignement primaire (1882-1884), recueil de documents parlementaires relatifs à la discussion de cette loi à la Chambre des députés. 6 francs.

Fascicule 2. Une acquisition de la bibliothèque du Musée pédagogique: *Dialogus Jacobi Fabri Stapulensis in phisicam introductionem. Introductio in phisicam Aristotelis*; imprimé en 1510 par Jean Haller, à Cracovie. Étude bibliographique et pédagogique, par L. Massebieau. 50 centimes.

Fascicule 3. Répertoire des ouvrages pédagogiques du xvi^e siècle (*Bibliothèques de Paris et des départements*). 6 francs.

Fascicule 4. L'enseignement expérimental des sciences à l'école normale et à l'école primaire, par René Leblanc. 80 centimes.

Fascicule 5. Compte rendu officiel du Congrès international d'instituteurs et d'institutrices, tenu au Havre du 6 au 10 septembre 1885. 2 francs.

Fascicule 6. Règlements et programmes d'études des écoles normales d'instituteurs et des écoles normales d'institutrices. 1 franc 25 centimes.

Fascicule 7. *Schola aquitana: Programme d'études du collège de Guyenne au seizième siècle*, réimprimé avec une préface, une traduction française et des notes, par L. Massebieau, 1 franc 80 centimes.

Fascicule 8. Instruction spéciale sur l'enseignement du travail manuel dans les écoles normales d'instituteurs et les écoles primaires élémentaires et supérieures. 70 centimes.

Fascicule 9. Projet d'instruction pour l'installation d'écoles enfantines modèles. 50 centimes.

Fascicule 10. Le projet de loi sur l'organisation de l'enseignement primaire (1886), recueil de documents parlementaires relatifs à la discussion de cette loi au Sénat (*première délibération*). 3 francs.

Fascicule 11. Le projet de loi sur l'organisation de l'enseignement primaire (1886), recueil de documents parlementaires relatifs à la discussion de cette loi au Sénat (*deuxième délibération*). 2 francs.

Fascicule 12. La philosophie et l'éducation; Descartes et le xviii^e siècle, par Georges Lyon. 80 centimes.

Fascicule 13. Conférence sur l'histoire de l'art et de l'ornement, par Edmond Guillaume. 3 francs.

Fascicule 14. Les écoles industrielles à l'étranger, d'après les rapports de MM. Salicis et Jost. 1 francs.

Fascicule 15. Les boursiers de l'enseignement primaire à l'étranger. 50 centimes.

Fascicule 16. Écoles d'enseignement primaire supérieur. Historique et législation. 50 centimes.

Fascicule 17. L'instruction publique à l'exposition universelle de la Nouvelle-Orléans, par B. Buisson. 3 francs.

Fascicule 18. Le projet de loi sur l'organisation de l'enseignement primaire (1886), recueil de documents parlementaires relatifs à la discussion de cette loi à la Chambre des députés. 1 franc 75 centimes.

Fascicule 19. Les colonies de vacances. Mémoire historique et statistique, par M. W. Bion. 80 centimes.

Fascicule 20. Règlements organiques de l'enseignement primaire. 2 francs.

- Fascicule 21. Bibliothèques scolaires. Catalogue d'ouvrages de lecture. 75 centimes.
- Fascicule 22. Catalogue des bibliothèques pédagogiques. 50 centimes.
- Fascicule 23. Catalogue des lectures récréatives pour les veillées de l'école et de la famille. 75 centimes.
- Fascicule 24. Catalogue des périodiques scolaires de tous les pays. 50 centimes.
- Fascicule 25. Résumé du Répertoire des ouvrages pédagogiques du xvi^e siècle. 1 franc 50 centimes.
- Fascicule 26. Le phonétisme au Congrès philologique de Stockholm, par M. Paul Passy. 80 centimes.
- Fascicule 27. Décret déterminant les règles de la création et de l'installation des écoles primaires publiques. 1 franc.
- Fascicule 28. Pestalozzi, élève de J.-J. Rousseau, par M. Hérisson. 3 francs 50 centimes.
- Fascicule 29. Le certificat d'aptitude pédagogique, par M. Berger. 1 franc.
- Fascicule 30. Le certificat d'études primaires supérieures. 50 centimes.
- Fascicule 31. Bibliothèque circulante du Musée pédagogique. 50 centimes.
- Fascicule 32. Catalogue des bibliothèques des écoles normales d'instituteurs et d'institutrices. 50 centimes.
- Fascicule 33. Deux ministres pédagogues : M. Guizot et M. Ferry (avec une introduction de M. F. Pécaut). 50 centimes.
- Fascicule 34. Enseignement de l'agriculture. 2 francs.
- Fascicule 35. Instruction spéciale sur l'enseignement du dessin, par M. Keller. 1 franc.
- Fascicule 36. Bourses de l'enseignement primaire supérieur. 75 centimes.
- Fascicule 37. Résumé des états de situation de l'enseignement primaire pour l'année scolaire 1885-1886. 50 centimes.
- Fascicule 38. L'exposition scolaire de 1889. 75 centimes.
- Fascicule 39. Extraits d'Horace Mann, avec notice, par M. Gaufres. 2 francs.
- Fascicule 40. Décrets, arrêtés, circulaires et décisions ministérielles pour l'application de la loi du 30 octobre 1886 et des règlements organiques du 18 janvier 1887. 2 francs.
- Fascicule 41. L'Algérie. Lois et règlements scolaires. 2 francs.
- Fascicule 42. Les auteurs du brevet supérieur, par Mlle. S. R. 1 franc 75 centimes.
- Fascicule 43. Le cahier de devoirs mensuels. 1 franc 75 centimes.
- Fascicule 44. L'histoire des mots, par Michel Bréal. 75 centimes.
- Fascicule 45. Comment les mots changent de sens, par Littré, avec préface de Michel Bréal. 1 franc.
- Fascicule 46. Écoles manuelles d'apprentissage et écoles professionnelles. 2 francs.
- Fascicule 47. Textes de compositions des examens et concours de l'enseignement primaire en 1887. 1 franc.
- Fascicule 48. Titres et brevets de capacité : Règlements en vigueur et modifications proposées. 1 franc.
- Fascicule 49. L'enseignement de la gymnastique dans les établissements d'enseignement primaire. 1 franc.
- Fascicule 50. Projet de loi sur les dépenses ordinaires de l'enseignement primaire et les traitements du personnel de ce service. 2 francs 50 centimes.
- Fascicule 51. Projet de loi sur les dépenses ordinaires de l'instruction primaire et sur les traitements du personnel de ce service. Recueil de documents parlementaires relatifs à la discussion de cette loi à la Chambre des députés. 75 centimes.
- Fascicule 52. Projet de loi sur les dépenses de l'instruction primaire et sur les traitements du personnel de ce service. Recueil de documents parlementaires relatifs à la discussion de cette loi au Sénat. 2 francs.
- Fascicule 53. Recueil des textes de compositions donnés aux examens des brevets de capacité. 7 francs.

- Fascicule 54. Recueil des textes de compositions donnés aux examens des brevets de capacité. 7 francs.
- Fascicule 55. Recueil des textes de compositions donnés au concours de 1887. 7 francs.
- Fascicule 56. Les trois écoles nationales professionnelles. (Vierzon, Voiron, Arménitières.) 75 centimes.
- Fascicule 57. Discours prononcé au banquet de l'Association des anciens élèves de l'École normale de la Seine. 75 centimes.
- Fascicule 58. Les écoles normales supérieures d'enseignement primaire de Saint-Cloud et de Fontenay. 2 francs 50 centimes.
- Fascicule 59. Conférences et causeries pédagogiques, par F. Buisson. 2 francs.
- Fascicule 60. Révision des programmes. (Question du surmenage.) 1 franc 60 centimes.
- Fascicule 61. Comptabilité des écoles normales. 1 franc 75 centimes.
- Fascicule 62. Les classes enfantines. Documents législatifs et administratifs, avec introduction, par F. Buisson. 75 centimes.
- Fascicule 63. Discours de réception de M. Gréard à l'Académie française. 75 centimes.
- Fascicule 64. Questions historiques, par Eugène Muller. 3 francs 50 centimes.
- Fascicule 65. Statistique de l'enseignement primaire supérieur (écoles et élèves) au 31 décembre 1887. 1 franc 25 centimes.
- Fascicule 66. Livres scolaires en usage dans les écoles primaires publiques. 1 franc 75 centimes.
- Fascicule 67. Discours sur l'éducation physique, prononcé à la Chambre des députés par M. le docteur Blatin. 20 centimes.
- Fascicule 68. Exposition de Melbourne. 1 franc 75 centimes.
- Fascicule 69. Rapport sur la marche du Musée pédagogique en 1887. 75 centimes.
- Fascicule 70. Classement général des écoles primaires publiques en 1888-1889. 1 franc 25 centimes.
- Fascicule 71. Note sur l'instruction publique de 1789 à 1888, suivie du catalogue des documents originaux existant au Musée pédagogique et relatifs à l'histoire de l'instruction publique en France durant cette période. 80 centimes.
- Fascicule 72. L'œuvre des colonies de vacances à Paris en 1887. Rapport de M. Cottinet. 75 centimes.
- Fascicule 73. La question de la réforme orthographique, par A. Darmesteter. 50 centimes.
- Fascicule 74. Programmes généraux des écoles manuelles d'apprentissage. 50 centimes.
- Fascicule 75. Résumé des états de situation de l'enseignement primaire pendant l'année 1886-1887. 50 centimes.
- Fascicule 76. Convention scolaire franco-suisse. 50 centimes.
- Fascicule 77. Travaux de la commission de gymnastique. 1 franc 75 centimes.
- Fascicule 78. Documents statistiques sur la situation budgétaire de l'enseignement primaire public. 75 centimes.
- Fascicule 79. Rapport sur l'exposition de Copenhague, par Mlle. Matrat. 1 franc.
- Fascicule 80. Lois et règlements organiques de l'enseignement primaire. 2 francs.
- Fascicule 81. Programmes révisés des écoles normales d'instituteurs et d'institutrices. 50 centimes.
- Fascicule 82. Programmes des écoles primaires supérieures. 50 centimes.
- Fascicule 83. L'enseignement primaire professionnel, par M. George Paulet. 3 francs.
- Fascicule 84. Recueil des textes de compositions des examens de l'enseignement primaire en 1888. 1 franc 80 centimes.
- Fascicule 85. Rapport du Dr. Proust et du Dr. Brouardel sur la vaccination et la revaccination. (En préparation.)
- Fascicule 86. Prix Bischoffsheim. Jeux scolaires. 30 centimes.
- Fascicule 87. Les commencements de l'instruction primaire à Strasbourg, par Engel. (En préparation.)

- Fascicule 88. Recueil des arrêts du Conseil supérieur de l'instruction publique en matière contentieuse et disciplinaire (1889).
- Fascicule 89 et 90. Projet de loi sur les dépenses ordinaires de l'enseignement primaire et les traitements du personnel.
- Fascicule 91. Congrès international de l'enseignement primaire. Analyse des mémoires (1889).
- Fascicule 92. Les lois collégiales de l'Académie du Béarn de 1568 à 1580, par M. Paul de Félice.
- Fascicule 93. Basedow et la Réforme de l'enseignement en Allemagne, par M. Pinloche.
- Fascicule 94. L'instruction publique des femmes en France par le Dr. Wychgram, traduit par E. Esparcel (1889).
- Fascicule 95. Compte rendu des séances du Congrès international de l'enseignement primaire (1889).
- Fascicule 96. Les recettes et les dépenses de la République française, de 1870 à 1889, par Alcide Amelon (1889).
- Fascicule 99. Textes de composition des examens et concours de l'enseignement primaire en 1889. 2 francs 50 centimes.
- Fascicule 100. Lois et règlements sur l'instruction primaire, par Jean d'Estournelles de Constant. 7 francs 50 centimes.
- Fascicule 101. Classement du personnel de l'enseignement primaire. 1 franc.
- Fascicule 102. Loi du 19 juillet 1889, documents relatifs au classement et au traitement des instituteurs. 1 franc 50 centimes.
- Fascicule 103. Décret du 24 juillet 1890, allocations au personnel de l'enseignement en Algérie. 75 centimes.
- Fascicule 104. Indemnités de résidence au personnel des instituteurs. 1 franc 25 centimes.
- Fascicule 105. Règlements relatifs au département de la Seine. 50 centimes.
- Fascicule 106. Recueil de règlements relatifs à la loi du 19 juillet 1889. 1 franc.
- Fascicule 107. Discussion du budget du ministère de l'instruction publique. 1 franc.
- Fascicule 110. Recueil des arrêts rendus par le Conseil d'État et le Tribunal des conflits sur les affaires relatives à l'enseignement primaire, 1879-1891. 3 francs.
- Fascicule 111. Jeux scolaires. Prix Bischoffsheim et prix de la Société d'assistance pour les aveugles. 30 centimes.
- Fascicule 112. Les Colonies de vacances de la ville de Paris. 25 centimes.
- Fascicule 113. Inspection médicale des écoles. 50 centimes.
- Fascicule 115. Textes de compositions des examens de l'enseignement primaire en 1890. 1 franc 25 centimes.
- Catalogue des ouvrages et documents de la Bibliothèque centrale de l'enseignement primaire. 2 vol. 12 francs. Chaque volume séparément, 6 francs. Tome III. Supplément. 4 francs.

SECOND SERIES.

EDUCATIONAL MONOGRAPHS.

NOTE.—A short account of the various monographs by Jules Steeg may be found in the *Revue pédagogique*, vol. VI, pp. 1-24. The original scheme is given in Vol. XIII, pp. 533-536.

Tome I.

Introduction. Rapport sommaire à M. le Ministre. Le Directeur de l'enseignement primaire. F. Buisson.

1. Mouvement des idées pédagogiques en France depuis 1870. H. Marion.
2. Législation et réglementation de l'enseignement primaire de 1878 à 1888. F. Martel.
3. Tableau général de l'organisation de l'enseignement primaire, public et privé à ses divers degrés. Leyssenne.

4. L'enseignement obligatoire et les commissions scolaires. Dreyfus-Brisac.
5. L'inspection de l'enseignement primaire à ses différents degrés. Bertrand et Boniface.
6. Le Conseil supérieur de l'instruction publique (1880-1889). Jallifier.
7. Organisation financière et budget de l'instruction primaire. Turlin.

Tome II.

8. Situation scolaire des départements en 1878 et en 1888. Les inspecteurs d'académie.
9. Écoles primaires supérieures, les écoles d'apprentissage et écoles nationales professionnelles F. Martel et G. Ferrand.
10. Bourses de l'enseignement primaire supérieur et professionnel en France et à l'étranger. Armagnac.
11. Notice historique sur les écoles normales d'instituteurs et d'institutrices. Jacoulet.
12. Organisation et administration matérielle des écoles normales. Clerc.
13. Extraits des rapports des recteurs sur le développement et sur la situation des écoles normales d'instituteurs et d'institutrices (1878-1888). Les recteurs.
14. Notices sur les écoles normales supérieures d'enseignement primaire de Fontenay-aux-Roses et de Saint-Cloud. Pécaut et Jacoulet.

Tome III.

15. Le musée pédagogique. Beurier.
16. La librairie scolaire. Paul Delalain.
17. Bibliographie de l'enseignement primaire (1878-1888). d'Ollendon.
18. La presse pédagogique et les bulletins départementaux. Beurier.
Les périodiques scolaires français de 1789 à 1889.
19. Les examens du personnel de l'enseignement primaire. Jost.
20. Les auteurs français de l'enseignement primaire. Hémon.
21. Le certificat d'études primaires élémentaires. Carré.
22. Les bibliothèques scolaires. Goepf.
23. Les bibliothèques pédagogiques. Sabatié.
24. Les conférences pédagogiques. Aubert.
25. Les congrès pédagogiques d'instituteurs. Couturier.
26. Les expositions scolaires départementales. Defodon.

Tome IV.

27. L'enseignement de la lecture, de l'écriture et de la langue française dans les écoles primaires. Carré.
28. L'éducation morale dans les écoles primaires. Lichtenberger.
29. L'instruction civique. Mabillean.
30. L'enseignement de l'histoire dans les écoles primaires. Lemonnier.
31. La géographie dans l'enseignement primaire. P. Dupuy.
32. L'enseignement de l'arithmétique et de la géométrie. Dalsème.
33. L'enseignement du travail manuel. Salicis.
34. L'enseignement de l'agriculture dans les écoles normales d'instituteurs et dans les écoles primaires. Prillieux et Schribaux.
35. Les langues vivantes dans l'enseignement primaire. Michel Bréal.
36. L'enseignement du dessin. Guillaume et Pillet.
37. L'enseignement du chant. Cornet.
38. L'enseignement de la gymnastique et des jeux scolaires. Dally.
39. La sténographie appliquée à l'enseignement primaire. Fourés.

Tome V.

40. Les caisses des écoles. Cadet.
41. Caisses d'épargne scolaires. de Malarce.
Not sent in in time to be printed.
42. Les sociétés de secours mutuels entre les instituteurs et les institutrices. Marie Cardine.
43. Associations amicales d'anciens élèves d'écoles normales et d'écoles primaires. Brunel.
44. Œuvre de l'orphelinat de l'enseignement primaire en France. Galliard.
45. État actuel en France du patronage et de l'enseignement des apprentis. Cacheux.
46. De l'éducation des enfants assistés et des enfants moralement abandonnés en France. Brueyre.
47. Les colonies de vacances en France et à l'étranger. Ed. Cottinet.

Tome VI.

48. Constructions scolaires. Petit et Lambert.
49. Les écoles de hameau. Poitrineau.
50. Hygiène scolaire et inspection médicale. Dr. A. J. Martin.
Not sent in in time to be printed.
51. Les écoles maternelles. Mlle. Matrat et Mlle. Kergomard.
52. Les musées scolaires. Serrurier.
53. L'imagerie scolaire. Henri Havard.
54. Les petits musées d'art scolaires. P. Mantz.
55. L'enseignement privé.
Under this heading it was intended to publish articles on I écoles catholiques (laïques), II écoles catholiques (congréganistes), III écoles protestantes, IV écoles Israélites. For I and II nothing was sent to the minister; III is signed by F. Piaux; IV is not signed.
56. Les sociétés d'enseignement primaire. Martel.
57. L'enseignement primaire en Algérie. Leyssenne.
58. L'enseignement public dans la Régence de Tunisie. Machuel.
59. L'instruction primaire dans les colonies françaises. Franck Piaux.
60. L'alliance française. Foncin.

CHAPTER III.

THE INTERNATIONAL CONGRESS OF SECONDARY AND SUPERIOR EDUCATION HELD AT PARIS, 1889.¹

By M. EDMOND DREYFUS-BRISAC, *Chief Editor*.

The International Congress of superior and secondary education is on the point, as we pen these lines, of terminating its labors. Its first general session was held on Tuesday, August 6, at 10 a. m., in the great amphitheater of ancient Sorbonne, and its closing session in the same hall on Saturday, August 10, and it separated after having exhausted all the questions on its programme. The deliberations were continued without interruption for one week, in presence of a numerous assembly and of a select public, whose zeal and interest were not relaxed for an instant. The success of the congress was brilliant and surpassed the hopes of its promoters. The concurrence of several scientific sessions at the same time did not operate so injuriously as was feared, and we saw philosophers, physiologists, and physicians escaping from the natural attraction of their own special congresses to bring to us the coöperation of their experience and knowledge.

We have not the time to describe at length and with minute details these discussions, so replete with interest, in which all countries were represented by official delegations as well as by the free initiative of many of the most eminent men, but we believe that those of our readers who took part in the labors of the congress as well as those who were prevented from assisting, will appreciate the brief outline here given of the course pursued, the questions discussed, and the decisions which were reached with unquestionable judgment and after thorough discussion.

The committee on organization, presided over by M. Gréard, vice-rector of the Academy of Paris, submitted as a programme for the discussions of the congress the five subjects following:

First. Limitation and approbation of secondary studies (baccalaureate and certificates of completion). Reporter, M. Pigeonneau.

¹From the *Revue Internationale de l'Enseignement*, Paris, France, August 15, 1889.

Second. The international equivalence of studies and degrees. * Reporters, MM. Bufnoir and Cart.

Third. The various forms of secondary education: What share in the ancient languages, the modern languages, and sciences is suitable to each? Reporter, M. Croiset.

Fourth. The method to pursue in the secondary instruction of young girls, particularly in living languages and in the sciences. Reporters, MM. Bossert, Darboux, and Edmond Perrier.

Fifth. What place should be assigned to economic and social sciences in the programme of superior education? Reporter, M. Boutmy.

Each of these questions, it should be observed, was made the subject of one or more preliminary reports, which were issued in pamphlet form and distributed to all the members. These remarkable studies, as testified to by the rector of the University of Brussels, with general assent, at the closing session, greatly facilitated our labors; and the larger part of their conclusions, almost always in the very terms adopted by their authors, were ratified by the congress.

The general assembly, at its first reunion, confirmed from the outset the functions of the committee on organization, and added to it a certain number of persons selected from among the foreign nations particularly represented at the congress. Conformably to article 6 of the rules, the different questions submitted by the committee on organization were distributed between the sections of superior and secondary education. The first section chose for its president M. Bufnoir, professor of the faculty of law, of Paris, and the second, M. Morel, inspector-general of secondary education. Each of the questions examined in the sections had for its object a new special report, the conclusions of which were discussed in three general assemblies, Thursday the 8th, Friday the 9th, and Saturday the 10th of August. We publish further on these several reports, with the official report of the general assemblies. The analysis of opinions expressed and of the solutions adopted will also be found. The congress, with several close distinctions, ratified generally at its plenary sessions the decisions previously arrived at in the sections. We hope to make known briefly their nature and object.

The first question submitted to the congress related to the method to be pursued in the secondary instruction of young girls, for education in living languages and in the sciences. The order of ideas, the province of pure pedagogy, gave place to an exchange of observations much more interesting because ladies were largely represented in the reunion. We had the pleasure of having among us Miss Buss and Miss Beale, directresses in England of important institutions for young girls; Miss Rosalie See, professor at Wellesley College, United States; Mme. Griseri, directress of the Alexandre Manzoni Lyceum for young girls at Milan; quite a number of professors of *lycées* in France for young girls, and several Russians. At the side of these ladies sat M. Erke-

lenz, director of the school for girls at Cologne, whose presence and counsels were valuable in all respects. The reports of Mmes. Mourgues and Soult on the decisions reached in section were very remarkable. In that which concerned the sciences we may sum up thus:

First. It is proper to give young girls in *lycées* lessons in algebra to elevate the standard of the education they receive, and because in certain cases, notably in arithmetic, algebra simplifies the mode of procedure.

Second. Instruction in geometry should aim at development of the mind. The professor will be able to interest the majority of the pupils in it provided its application is shown as soon as possible.

Third. The division of cosmography into two parts—one belonging to geography, the other explaining the appearance of celestial phenomena—should be maintained.

Fourth. Instruction in physical sciences should, above all, be experimental.

Everybody seemed to be in harmony with these views.

The discussion on the living languages was more lively and animated. Finally, by a large majority, the congress adopted the following resolutions:

Practical instruction in the living languages should commence as early as practicable.

Theoretical instruction should be deferred until the first elements of grammar in the mother tongue have been acquired.

A very wide divergence of opinion was manifested on the principal course to pursue in the study of the living languages. While M. Rabier appeared to attach more importance to the reading, in view of scientific and literary education, M. Bréal contended that the essential thing is to become conversant with a language well enough to speak it; so as to enter into direct communication with foreign peoples and to become intimate with their customs, institutions, and civilization.

M. Egger had been charged with the report on another question discussed in the section of secondary education relating to the various forms to be given to higher education. The Congress recognized the necessity of establishing three types of education, which it named as follows: Classical education—Greek-Latin, Latin humanities, and modern secondary education. It will be seen that the title of "classic" was exclusively reserved for that education which rests on profound study of the ancient languages. But in the main, these designations, at least to our idea, possessed only relative importance. It is worthy of remark that nobody cared to contest the utility and expediency of creating, by the side of ancient classical education, a modern education in which the sciences and the living languages should take the place of Greek and Latin.

The report of M. Croiset tended to yield, in this order of education, a marked predominance to literature over the sciences. M. Dietz em-

played the occasion to sustain with his habitual force his favorite theme. For him, modern education should predominate and be in a large measure literary. That which, in his eyes, distinguishes secondary instruction from primary instruction is the association of a foreign language with the maternal language as an instrument of analysis for training the mind. As for ourselves we have always believed that primary education was the minimum of education necessary alike to all, and that secondary education was more solid, more complete, more substantial, both in the matter of instruction and the methods employed. Mr. Stanley, of London, who took so brilliant and useful a part in all the deliberations of the Congress, demonstrated by arguments, as clear as they were judicious, that secondary modern education need not be exclusively literary nor exclusively scientific, but tending rather toward large development and high mental culture through harmonious accord with literature and science. This system, defended with spirit by M. Rosenfeld, and with emphatic language by M. Chapuis, rector of the Academy of Dijon, was adopted by a pronounced majority.

The third question proposed by the committee on organization, under the title of limitation and sanction of secondary studies (baccalaureate and certificate of maturity), precipitated a series of very delicate solutions which were not entirely settled by the Congress. The necessity was clearly recognized that secondary studies should receive a sanction; that the best mode of sanction is that which permits conscientious pupils of average intelligence to obtain the certificate without special preparation by following the regular course of studies—in fine, account should be made of marks obtained in the class whatever be the mode of sanction adopted.

M. Herzen, the eminent physiologist of Lausanne, desired to obtain from the Congress a bold decision, making the greater part of university studies, and particularly medical studies, open to young men coming from one or the other of the three types of secondary education above mentioned. But it was not possible without profound discussion to dispose of a question of such importance; and this discussion, which had neither been anticipated nor prepared for, was necessarily postponed, much to our regret.

A very spirited debate was provoked over the preference to be accorded to the certificate of maturity, as it is awarded in Germany and on the baccalaureate, as it is given in France. M. Blanchet, commending the system in use in almost all foreign countries, insisted that the examination upon leaving college should be before the professors of the institution where the pupil had studied, and under the superior control of a delegate of the State. M. Lichtenberger spoke warmly in the same vein. The various bearings of this question prevented its being pushed to a vote. Several persons, as well in the section as in the plenary meeting, notably M. Pigeon-

neau and the rector of Dijon, remarked that, for several countries, the question had not only a pedagogical interest, but also a political and administrative character; that in France notably, and also in Belgium, the proposed reform broke itself against insurmountable obstacles, principally because of the unequal value of education in the various establishments of secondary instruction, public or free; that while admitting that this proposition might reunite the majority in the Congress, it never would be received by certain governments. What good was it to set forth purely platonic views, without possible sanction, and consequently without importance and effect? The question was very properly raised whether one of the resolutions already adopted by the Congress, excluding all special preparation for obtaining a certificate of study, does not give sufficient satisfaction to the adversaries of the baccalaureate in its actual form?

The section of superior education, under the able direction of M. Bufnoir, examined two questions which were made the subject of two excellent reports, one by M. Cart, on the national equivalence of studies and degrees; the other, by M. Blondel, on the place to assign social sciences in superior instruction.

Respecting that which concerns social sciences, we heard the interesting communications of the Marquis Alfieri, of Florence; M. Gaudenzi, of Bologne; M. Urechia, of Bucharest; M. Gentet, of Geneva; MM. Van der Rest and Hulin, of Brussels; M. Medweczky, of Pesth, and M. Blondel, of Lyons. M. Alfieri, notably presented in the section and also in the general assembly, with his great authority, considerations of the highest importance touching the Institute of Social Sciences, which he founded at Florence on the model of the Free School of Political Sciences of Paris, but under somewhat different form and with less resources. In what fashion must we organize and in what frame work must we place this education? On this point the most diverse views were presented.

Some proposed to establish for its service schools or special faculties, while others inclined to attach it either to the faculty of law or the faculty of philosophy. In Belgium it is proposed to inaugurate, as an experiment, a union of conferences to which the several faculties should contribute. For our part, we have been impressed with an observation presented in the course of discussion, namely, that it will be very dangerous to incorporate this education, now new and in process of formation, with a branch of study having traditional forms long since settled. The effect of the old education upon the new might be depressing; one would fear an arrest of growth, a premature absorption.

The Congress, adopting the views of the sections, avoided responding in a too positive manner to the question presented by the committee on organization, but it affirmed the importance of economic and social sciences, in expressing the opinion that they should have a larger place than heretofore in superior education.

The discussion on the international equivalence of studies and degrees afforded constantly the liveliest interest and terminated in the happiest conclusions.

The following resolutions were adopted:

It is proper to admit and establish the international equivalence of diplomas, or of certificates, declaring the studies of secondary education required as condition of admission to studies of superior education of various orders.

It is proper to recommend, as a useful international practice, the concession to the students of the right to accomplish, in a foreign university, a part of their course.

It is proper, after valuation of the titles gained and without any distinction of nationality, to accord the international equivalence of certificates of examination and of degrees from a scientific standpoint and as a condition of the pursuit of a more elevated grade.

Upon the proposition of M. Gentet, and in the midst of applause, the President declared, in the name of the Congress, that the vote taken in the plenary meeting was unanimous. Many of our compatriots who assisted in these debates (among whom we distinguished three deans of faculties of the Academy of Paris and several rectors) graciously admitted that, up to the present time, in these matters the traditions of France were not overliberal. In a fine discourse M. Bufnoir, resuming the debates of the section, protested particularly against that contemptible over-zeal for the public treasury impressed upon our regulations and which it was important to have abolished at once. In the midst of the first section and of the general assembly following, Dr. Laskowsky, in forcible and elevated language, glowing with warm sympathy for our country, showed by decisive arguments that it was of the highest interest to France to facilitate the studies of foreigners in her dominions and of her own citizens in foreign countries. The French people did not travel enough, he said; they did not see enough; all of the French students who visited foreign nations were too much the apostles of French ideas, French interests, French civilization. One could appreciate at this moment from the standpoint of the fraternity of peoples the happy results of the presence at Paris of so many foreign students.

As M. Gréard remarked, in the admirable discourse in which he reviewed the discussions and the decisions of the Congress, that had the assembly merely given the vote on the equivalence, it sufficed to mark the elevated character and utility of these international meetings. The representatives of all countries were of one accord in throwing down all the useless barriers which separate peoples in their intellectual interchanges.

In this very rapid epitome, written in a sort of off-hand vein, we have only noticed the most important decisions arrived at by the Congress and mentioned the names of a few of the most eminent persons who took

part in the discussion. Elevated and judicious views were presented (speaking only of foreigners) by Messrs. Harris and Clarke, delegates from the United States; M. Gavard, state councilor of Geneva; M. Collard, of the University of Louvain; M. Spruyt, of the University of Amsterdam; M. Van Hamel, of the University of Groningen; M. Geiser, of Zurich; M. Hartaux, of Namur; M. Hurdebise, of Hasselt; M. Giner, of Los Ríos, and M. Ramon de Luna, of Madrid; M. Storm, of Christiania; M. Mustapha Bey, of Cairo; MM. Basiadis and Philaretos, of Athens; Mr. Widgery, of London, and many others whom we omit, whose ideas and propositions are contained in the reports of our meetings.

But that which above all should be described is the good intent and cordiality and, if I may express myself thus, the joy to feel ourselves in union and able to communicate to each other all those sincere sentiments of fraternity which leave the most lasting souvenirs in our hearts. At no moment was experienced that lassitude or *ennui* which sometimes characterizes these reunions. There existed but the single regret that we were so soon to part. Before our separation, the representatives of several countries sought to express to the President of the Congress their gratitude and their sentiments of respect and admiration.

M. Gréard could see to what extent his work and his personality gratified the foreign peoples, and how they appreciate here the great literary value and likewise the high pedagogical standard of his magnificent labors on instruction and education of all degrees. Let us add that many friends of France, who took part, notably in the name of Switzerland, England, Greece, and Italy, after having thanked the President, the members of the bureau, the many ladies who assisted in the Congress, and afforded it so charming an attraction, endeavored to mount higher and beyond (to employ their own expressions) in their sympathy and good wishes. They testified their appreciation of the extended and affectionate hospitality which they received on our soil and in our capital.

A Frenchman is always happy to hear good words spoken of France, but that which gives particular value to such sentiments is the sincerity of those who express them in their own name or in the name of their country. It is for us to place a hand in that which is extended, to draw closer the bonds of fraternity that unite us to various peoples, and, as the desire was affirmed repeatedly in the Congress, to encourage anew, at an early period, another of these international meetings, where so many ideas are exchanged, where so many results are communicated, where decisions so useful to all are accepted, where personal relations so profitable and so attractive are formed by each one, and which, in bringing individuals together, contribute so powerfully to unite all peoples in the aspiration for progress and in the conception, growing each day clearer and more enlightened, of the numerous interests and wants that are common to all civilized nations.

THE INTERNATIONAL CONGRESS OF SUPERIOR EDUCATION; ALSO OF SECONDARY EDUCATION.

COMMITTEE ON ORGANIZATION.

Honorary Presidents.—MM. Berthelot, member of the Institute and senator; Jules Simon, member of the Institute and senator.

President.—M. Gréard, member of the Institute and vice-rector of the Academy of Paris.

Vice-Presidents.—MM. Bréal, member of the Institute and professor at the College of France; Lapparent (de); Morel, inspector-general of public instruction.

Secretaries.—MM. Dreyfus-Brisac, editor in chief of the *Revue Internationale de l'Enseignement*, and Perrier, professor at the museum.

Members.—MM. Audiffred, deputy; Beaussire, member of the Institute; Bossert, inspector-general of living languages; Boutmy, member of the Institute and director of the Free School of Political Sciences; Bufnoir, professor of the faculty of law; Combes; Compayré, deputy; Croiset, professor at the faculty of letters and president of the Society of Secondary Education; Darboux, member of the Institute and professor at the faculty of sciences; Gauffrès, municipal councillor; Girard, head master of the Condorcet Lycée; Godart, member of the superior council of public instruction and director of the School Monge; Lavissee, professor at the faculty of letters; Léon Le Fort, member of the Academy of Medicine and professor at the medical faculty; Liard, director of superior education in the ministry of public instruction; Manuel, inspector-general of secondary education; Mercadier, director of studies at the Polytechnic School; Merlet, professor of rhetoric; G. Perrot, member of the Institute and director of the Normal School; Pigeonneau, assistant professor in the faculty of letters; Camille Sée, councillor of state; Vintéjoux.

BUREAU OF THE CONGRESS.

The first general assembly of the Congress, reassembled Tuesday, August 6, maintained, for direction of the labors, bureau members of the committee on organization and added the following names:

MM. the Marquis Alfieri, Italy; Dr. Basiadis, Constantinople; Miss Beale, directress of the Cheltenham School, England; Bogdanow, privy councilor, Moscow; Clarke, United States; Gavard, state councilor, Switzerland; Dr. Geiser, director of the Zurich (Switzerland) Polytechnic School; Giner de los Rios, professor at the University of Madrid, Spain; Dr. Harris, delegate from the Bureau of Education, United States; Machado, Portugal; Dr. Medvezky, professor at the University of Buda-Pesth, Austria-Hungary; Monteflor, Brussels, Belgium; Ramon de Luna, Spain; Lyulph Stanley, London, England; Dr. Storm, Christiania; Dr. Spruyt, Amsterdam; Van der Rest, rector of the University of Brussels, Belgium; Villari, Florence; V. A. Urechia, delegate from Roumania, member of the Senate and late minister of public instruction.

M. Espareel was designated as assistant secretary to the Congress.

FOREIGN MEMBERS.

Alfieri, Marquis, senator of the Kingdom of Italy, Florence.

Andrews, Miss Constance E., Young Girls' College, Cheltenham.

Andrews, Miss Alice M.

Apostolidès, M., delegate from the Hellenic commission.

Argent, Mlle. Elizabeth-Anna d', bachelor of letters, University of London.

Argent, Alina d'.

Armagnac, Madame, professor Young Girls' College, Cheltenham.

Ascoli, Graziado, correspondent of the Institute of France, senator, Milan.

Basiadis, Dr., Constantinople.

- Beale, Miss Dorothea, principal of the Cheltenham Ladies' College for superior and secondary instruction of about 700 girls.
- Bendalcanfor, Viscount of, inspector of the Central Lyceum at Lisbon.
- Benabenfior, Viscount of, peer of the Kingdom of Portugal, member of the Lisbon Academy of Sciences, inspector of secondary education Lisbon Lyceum.
- Bikélas.
- Bogdanow, Anatole, professor of the University of Moscow, privy councilor.
- Bogdanow, Elly, son of the preceding, student at Moscow.
- Bonneton, Philippe, director of Secondary and Superior School for Young Girls, Geneva, and officer of public instruction.
- Bouvier, Aimé, director of professional education of the Canton of Geneva.
- Buss, Miss Frances M., head mistress of the North London Collegiate School at Camden.
- Calleja, Julien, member of the council of public instruction at Madrid.
- Capellini, professor at the University of Bologne.
- Carderera, Mariano, member of the council of public instruction at Madrid.
- Carnazza, rector of the University of Catane.
- Cattanei, delegate of the Italian Government.
- Chancel, G., rector of the Academy of Montpellier.
- Chassiotis, G.
- Clarke, S. M., delegate from the Bureau of Education of the United States.
- Collard, François, professor at the University of Louvain.
- Conti, delegate of the Italian Government.
- Cossio, B., director of the Pedagogical Museum and delegate of the Free Institution of Education of Madrid.
- Dachsbeck, Mlle H., directress of the Intermediate Parish School for Young Girls, Paille street, Brussels.
- Dekterew, Dr., member of the permanent commission of the Pedagogical Museum of St. Petersburg.
- Discaille, Ernest, professor of the faculty of letters of Gand.
- Erkelenz, Dr., director of the Superior School and of the Superior Normal School for Young Girls at Cologne.
- Estrella, Baron d', delegate from Brazil.
- Eström, Dr., professor at the Lyceum of Vesteras, Sweden.
- Ferrari-Perez, G., delegate from the Mexican Government.
- Ferri, Louis, correspondent of the Institute of France, professor at the University of Rome.
- Finaczy, Dr. E., of Buda-Pesth.
- Floresco, Boniface, professor at Bucharest.
- Frieze, Henry S., professor at the University of Michigan.
- Fleury, Jean, lecturer of the French language at the University of St. Petersburg.
- Fruetiger, Dr. G., professor of physical sciences at the Professional School of Geneva.
- Galda, Manuel Maria José de, member of the Senate, Madrid.
- Gaudenzi, Augusto, professor at the University of Bologne.
- Gavard, councilor of state, in charge of the department of public instruction at Geneva and deputy to the council of the Swiss States.
- Geiser, Prof. Dr. C. F., vice-director of the Federal Polytechnic School at Zurich.
- Gentet, Ferd., professor of the University of Geneva.
- Gillon, Du.
- Gilbert, professor at the University of Geneva.
- Giner de Los Rios, F., professor at the University of Madrid and delegate of the Free Institution of Education.

Golliez.

Graebe, C., rector of the University of Geneva.

Griseri, Madame C., directress of the Alexandre-Manzoni Lyceum for Young Girls at Milan.

Guest, E., of the Schoolmaster, London.

Gusman, David, delegate from the Republic of Salvador.

Hamel, Van, professor at the University of Groningen, Holland.

Harlaux, Ch., prefect of studies at the Royal Athenæum of Namur and delegate of the Federation of Public Intermediate Education of Belgium.

Harris, Dr., delegate from the Bureau of Education, United States.

Herzen, A., professor at the University of Lausanne.

Houlé, A., delegate from the Government of Hawaii.

Hulin, Georges, doctor of philosophy and of law.

Hurdebise, prefect of the studies at the Royal Athenæum of Hasselt.

Kawraeisky, Théodore, member of the Imperial Society of Friends of Nature of the University of Moscow and secretary of the section of the Imperial Russian Society of Acclimation.

Krouchroll, Michel, doctor of sciences.

Laskowski, Professor, dean of the medical faculty of Geneva.

Lastarria, Washington, delegate from the Government of Chile.

Lubienska, Miss.

Machado, Bernardino, Lisbon.

Macfarlane, Alexander, professor of physics, University of Texas, United States.

Mames, Esperabe, rector of the University of Salamanca.

Massee, Miss Fannie.

Maton, M., Brussels.

Medveczky, F. de, professor at the University of Buda-Pesth.

Merkel, F., director of the Real School of Friburg in Brisgau.

Molengraaff, professor at the University of Utrecht, Holland.

Montefior, senator of the Kingdom of Belgium, Brussels.

Mustapha Bey, J., professor at the School of Medicine at Cairo.

Niedzialkowska, Madame, directress of Institute for Young Girls at Lemberg.

Nieto, Emilio, director-general of public instruction, Madrid.

Odobesco, professor at the University of Bucharest, formerly minister of public instruction.

Pacchiotti, Giacinto, senator, and professor at the University of Turin.

Pascucci, Raffaele, rector of the University of Macerata.

Palmer, Dr., professor at Harvard University.

Palmer, Mrs.

Pérard, M. Louis, professor at the University of Liège.

Philaréto, Georges V., advocate of the Areopagus of Athens, former deputy.

Pidal y Mont, Luis, deputy of the Cortes.

Pignola, Mlle.

Poni, P., professor at the Faculty of Sciences of Jassy, Roumania.

Quesquil, professor at the University of Gand.

Quintana, colonel, of the Astronomical Observatory of Tambaya (Mea).

Rakiint, Wladimir de, director of the corps of cadets of Ekaterinodar.

Ramon, de Luna, professor at the University of Madrid.

Rest, E. Van Der, rector of the University of Brussels.

Reilly, secretary of the Royal College of Sciences of Dublin.

Ritter, Eugene, dean of the Faculty of Letters of Geneva.

Robertson, Mrs. Margaret, professor at the College for Young Girls at Cheltenham.

Ross, Miss A., of Wellesley College.

Roth, R., professor at the University of Tübingen.

Russell, John.

Sacchi, delegate from the Government of Nicaragua.

Salaverry, Ant., delegate from Nicaragua.

Santamaria, Naples.

Sathal, Constantine, Venice.

See, Miss Rosalie.

Sivaen, Dr., director of the Anatomical Institute at Liège.

Serrano, Miquel, director of the Normal School of Mexico.

Spruyt, C. B., professor at the University of Amsterdam.

Storm, J.

Sturgeon-Mackay, John, professor at the Academy of Edinburg.

Snow, W., professor of mathematics, Boston, United States.

Stanley.

Stromer-Henny, Madame, member of the International Union, Friends of Young Girls (French Science).

Thomas, Paul, professor at the University of Gand.

Timofejewa, Mlle Anna, professor at the Gymnasium of Young Girls of Kharkof.

Torres, Campos Manuel, professor at the University of Granada.

Torres, Campos R., professor at the Normal School of Tutors and of Schools of the Association for the Education of Young Girls at Madrid.

Urechia, Prof., delegate of the Kingdom of Roumania.

Viale, Dr., delegate of the Argentine Commission.

Vilanova y Pieva, Jean, professor at the University of Madrid.

Villari, P., professor at the University of Florence.

Wassilieff, A., professor at the University of Kason.

Wellman, Parks C., civil engineer and professor of physics, New York.

Widgery, London.

Wiquelin, Eugene, professor at the Imperial and Royal Academy Maria Theresa, at Vienna.

Wollmann, Madame Elma, directress of the Lyceum for Young Girls at Presburg, Hungary.

Wuelfsberg, Miss Henriette, school directress in Norway.

Wychgram, professor at the Superior School for Girls of Leipsic.

THE GENERAL ASSEMBLY OF AUGUST 8, 1889.

PRESIDENCY OF MR. O. GRÉARD.

The session opened at 10 minutes after 9 o'clock.

The president read articles 15 and 16 of the rules, explaining the reason why the Congress should determine all the questions submitted by Saturday, at the latest.

The president granted permission for reading M. Egger's report on the third question submitted to the Congress—"The various forms of secondary education—what share in the ancient languages, modern languages, and sciences is suitable to each?"

Before proceeding to the discussion of the report of M. Egger, the president stated that M. Bonet-Maury, librarian of the Pedagogical Museum, had invited the members of the Congress to visit the exhibit of that office at the Champ-de-Mars. He also explained to the Congress that the portion of the subscriptions from which it was intended to liquidate the cost of printing reports should in the absence of M. Vintéjoux, the treasurer, be placed in the hands of M. Dreyfus-Brisac.

The president thereupon declared the discussion open.

M. Micé, on the question of the forms of secondary education, urged that superior primary education should be changed so as not to make it conflict, as is now done, with secondary education. A change was demanded in professional education. He asked that a decision be reached on the view he had submitted. The president remarked that this would encroach upon the proper domain of the Congress of pri-

mary education. He proposed at this time to discuss the positive propositions of the section.

First. It is proper to recommend, and consequently to establish, several standards of secondary education.

The president explained what these standards were: the first, ancient classic secondary education, comprehending the study of Greek and Latin; second, secondary education, not comprehending Greek, but only Latin; third, modern secondary education based on the study of modern languages, letters, and sciences, embracing neither Greek nor Latin.

The resolution of the section was deliberated upon.

M. Bufnoir expressed the fear that in these conditions all the inconveniences of bifurcation would be encountered with this aggravation that they would be felt more quickly than heretofore.

The president replied that there were imperative needs and that secondary education should be ready to respond to them. Questions of application were not referred to the Congress.

As no one desired to speak further, the president put the question to vote. "It is proper to recommend, and consequently to establish, several standards of secondary education," and the proposition was adopted.

Second. Is it proper to maintain simultaneous and obligatory education in Greek and Latin?

The president suggested that the proposition to make optional the study of Greek was rejected by the fact that overwork would ensue, and that the Congress had implicitly accepted the creation of a secondary education which comprehended only Latin.

The proposition was submitted for discussion.

Mr. Stanley approved the decisions of the section. He submitted that if it became necessary to sacrifice either language it should rather be Latin, since the aim of secondary education is to compare—to associate our actual ideas with those of antiquity, since all that which comes to us from the Romans emanates in reality from the Greek. Secondary classic education having for object the general culture of the mind, all that relates to Greece should be placed in the first rank.

The proposition being submitted to vote, was adopted.

Third. It now remains to examine the question, "Is it proper to permit a second form of classical secondary education where only one ancient language, the Latin, is studied?"

M. Basiadis stated that a society existed in Germany which favored the establishment of a special gymnasium where only the Greek is taught. If the pending proposition were accepted, it became necessary to organize two or three lyceums where the Greek only should be taught as the ancient language.

M. Erkelenz stated that this society mentioned by M. Basiadis existed no longer. The question had only been examined theoretically.

M. Gaufres expressed the opinion that pupils could not be found to learn only the Greek.

M. Micé declared that, in suppressing the Greek, education in Latin was diminished, and consequently that of French. He considered that actual classical education and secondary modern education should suffice.

M. Perrot concurred with M. Gaufres. In studying only the Greek and not desiring to study but the Greek, was to interdict all point of comparison. He nevertheless accepted the lyceum where only Latin is taught.

Mr. Stanley, in the denomination of the new education, proposed to substitute literary for the classic.

M. Michel Bréal said that it was important to know how this secondary education, reduced to a single language, should be established. If it is installed in institutions created expressly for it, that was very acceptable. It might happen in effect that the necessity would be recognized for going back deeper into the past,

that education in French should be given a more solid basis, and in that case Latin should be an adjunct to modern studies. This method of proceeding did not present any inconvenience. But it would be otherwise if we proceeded by way of suppression and retrenchment in limiting establishments to one language that up to the present time had taught two. This sort of proceeding was not to be recommended, although it has the appearance of being the easiest. Colleges thus treated would regard themselves as curtailed; their professors would feel out of place and depressed, and this suppression would be considered as announcement of ulterior suppressions. Experiment thus made under bad conditions would not answer; to expunge the Greek from a college would not suffice to make it strong in the modern languages. In the first hypothesis Latin would be considered an acquisition; in the second, a fragment, probably destined itself to disappear. Those who desired this form of secondary education should therefore seek to realize it by creations carefully elaborated, and not by obliterations which, if they are convenient, are as unproductive as they are easily made.

The president stated that the three types of education existed in Belgium under the names of Greco-Latin humanities, Latin humanities, and Modern humanities. He favored preservation of the word "classic," which implies for the education to which it is attached a disinterested aim.

M. Dietz proposed to define these words "secondary" and "classic." Does the benefit which is drawn from classical studies apply to those which embrace antiquity or to those which deal with languages foreign to the native language of the pupil?

Since primary education is open to all, it would seem that secondary education is that which follows. For M. Dietz, the words secondary education signified education in two degrees: education by a language other than the native one; the other language becoming an instrument of analysis for acquiring complete possession of the national language, would alone be insufficient to secure complete culture of the mind.

M. Dietz thought likewise that, for foreigners, French literature of the seventeenth century offered an instrument of esthetic culture much superior to that of Latin.

A member stated that in Italy classical education required actually eight years' study, the last five years being for Greek alone. In addition to this education there was another—a technical one, comprehending neither Greek nor Latin.

After a short discussion relating chiefly to questions of organization of the new education, the president put M. Basiadis' proposition to vote, and it was rejected.

The assembly proceeded afterwards to give expression to the resolution conformably to the view of Mr. Stanley, approved by M. Michel Bréal, to remove the classic classification from the new education.

A member proposed to style the new instruction the "Latin humanities." A short discussion followed, participated in by MM. G. Morel, Kuhff, Spruyt, Harlaux, and Perrot.

The president proposed to put to vote the denomination of "Latin humanities." M. Hamel moved to name the new instruction "semi-classic." The name "Latin humanities," being put to vote, was adopted.

A member proposed to amend by naming the third standard of education, "secondary classic-modern." This amendment was rejected.

Another member proposed the name "Modern humanities." This denomination was rejected.

The new instruction therefore was called "modern secondary education."

OF THE PART THE SCIENCES SHOULD TAKE IN CLASSIC EDUCATION.

The president explained that the section had decided to allow a slow, gradual, and very methodical education, directed in a manner, as much as possible, to retard specializations.

M. Herzen believed that in these conditions the Congress had contradicted itself, since it had adopted three standards of education.

The president repeated that there was no contradiction. In the classic education, the part yielded to the sciences should be relatively restricted, larger, however, in the Latin humanities, and again, larger in modern secondary education.

M. Rosenfeld explained that M. Croiset wished to say that in classic education letters were given a preponderating place, but the sciences, nevertheless, were not forgotten.

Question of the living languages.—The draft of the section is adopted. MM. Arnoulin and Dietz proposed amendments, which were rejected.

M. Rosenfeld moved, like M. Dietz, that the part given to living languages should be augmented in all the classes.

Mr. Stanley, in his turn, moved that a part be given to the living languages as large as the necessities of various instructions in elementary classes permitted. This proposition was adopted.

The director of secondary education asked at this time in what conditions instruction in living languages should be given. For himself, and he would insist upon the point, reading was the most useful for the pupils, and he urged for it an important place.

Madame Griseri believed that reading was an excellent means for learning to speak the language.

M. Erkelenz concurred in the opinion of M. Rabier. Reading should be, in the superior classes, the means of shaping the mind. In reading the great writers belonging to a foreign nation acquaintance is made with another people.

A number expressed the opinion that it would be better to commence by studies of the vocabulary.

The president replied that the Congress had not actually discussed questions of method.

M. Michel Bréal believed it his duty to protest, if it be desired to apply to modern languages the methods employed for study of ancient languages. This would be to make a false path. After so many years of study, are we really in possession of Latin and Greek? No; we possess a language only when we can speak it. We must be able at once to pour it from our mind and produce it outside; knowledge of text would not suffice. The handling of a language is a form of activity, and conversation, even if it be incorrect, proves more than a translation, by means of the dictionary, of a page of Goethe or Shakespeare. If it be wished, by favor of the word literary, to sanction for modern languages the processes employed for Greek and Latin, he believed a method would be recommended which could justify itself in respect to the dead languages, but which would be here out of place. It would not answer to compare, but to learn. The best professor of living languages is the one who, in his lessons, does not pronounce a word of the national language. Comparisons are only useful to him who already knows and who handles freely the two languages which are to be compared.

Modern secondary education.—M. G. Morel stated that the section proposed to suppress in the conclusions formulated in the report of M. Croiset the words "literary in a very large measure."

M. Micé moved, to the contrary, that modern secondary education should, above all, be literary.

M. Micé replied that the sciences were an important element of education, which could not be relegated to the second rank in this grade of education.

M. Basiadis expressed the fear that placing the word "scientific" before the word "literary" did not have the appearance of sacrificing letters; he proposed to reverse the proposition.

M. Dietz moved the following: "The Congress expresses the view that modern

secondary education, while conserving its practical character, should at the same time devote a large part of its instruction to literary culture."

M. G. Morel urged that this was a wording too special to France. He preferred the language of the section which, he said, had not desired to give predominance to either party.

The president summed up the discussion, and put to vote the draft of the section. It was adopted.

The second question, "Is it well in modern secondary education to give a place to Latin?" was determined negatively.

Third question: "Is it proper in modern secondary education to make instruction in living languages more important and more literary than it actually is?" Adopted.

The president fixed the order of the day for each of the two sections.

The next general reunion will take place August 9.

The session adjourned at noon.

GENERAL ASSEMBLY, AUGUST 9, 1889.

PRESIDENCY OF MR. O. GRÉARD.

The session opened at 9 a. m.

The order of the day was the discussion of the two following questions:

First. Of the method to follow in the secondary instruction of young girls, particularly for education in living languages and education in the sciences.

Second. International equivalence of studies and degrees.

THE FIRST QUESTION STUDIED IN THE SECTION OF SECONDARY EDUCATION.

EDUCATION IN THE SCIENCES.

Mlle. Mourgues, reporter, read her report.

After this reading the president declared the discussion open as to conclusions.

Mlle. Mourgues stated that a proposition from M. Darboux, concerning education in arithmetic, had been omitted. "It is necessary, in this education, to return for several reviews, to give from the outset rules of calculation and simple problems, and to introduce, little by little, the reasonings and the theories."

Mlle. Mourgues moved that the Congress consider these observations, which motion was adopted.

The conclusions of Mlle. Mourgues's report on mathematical sciences were afterwards adopted, namely:

First. It is proper to introduce algebra in instruction in arithmetic.

Second. Geometry should be taught chiefly as a gymnastic, as a means of discipline for the mind.

Third. Instruction in cosmography should, in elementary classes, be chiefly descriptive, and in superior classes chiefly mathematical.

Fourth. Physical sciences. This instruction should be, before all, general in manner, experimental, and embracing all the branches of physics.

Fifth. Chemistry. Mlle. Mourgues stated that they had not examined as they should concerning this point, which rested on a practical basis. She moved the following resolution, which was adopted: "Instruction in chemistry should be elementary and experimental."

Sixth. Natural sciences. This instruction should also be experimental; it should be limited to fundamental observations.

EDUCATION IN THE LIVING LANGUAGES.

Mlle. Soult, reporter, gave her lecture from memory.

The report concluded with two resolutions:

First. Practical education in living languages should commence as early as possible.

Upon the inquiry of Madame Griseri, relative to the method to follow as to pupils who have never been taught a foreign language, the president replied that the resolution adopted by the section responded to that question; the instruction should, above all, be practical, which, nevertheless, did not exclude grammar.

The Mlles. Beale, Soult, and Fanta exchanged several observations on the books used in England and France for study of pronunciation.

The first resolution being put to vote, was adopted.

Second. Theoretic instruction should be deferred until the first rudiments of the maternal languages have been acquired.

M. Bossert stated that to learn a language it became necessary to possess, from the outset, a certain vocabulary. Besides, it was necessary to distinguish between the grammar which goes from the example to the rule (and it should be early employed), and that which goes from the rule to the example, which should be employed as late as possible.

The second resolution was adopted, reserving M. Bossert's observation.

The president here remarked that the study of living languages, being considered a means of general culture, it would be desirable if young girls could travel in the country of which they had learned the language.

M. Herten asked if the study of Latin is permitted to young girls in their lycées to which the president responded affirmatively; nevertheless, this instruction addresses itself to the choice; it is also optional.

M. Dietz moved to submit the following view: In the secondary education of young girls the same professor on all possible occasions, particularly in the elementary classes, should be charged with the instruction of the national language as well as of a foreign language.

M. Dietz thought time would be gained in proceeding thus, and that the foreign language would serve in learning the national language.

M. Erkelenz combated M. Dietz's proposition; all the young girls who entered lycées did not finish their course. In such case they would leave the establishment without thoroughly knowing either their own or a foreign language.

Madame Desparmet-Ruelle believed that, for elementary classes, the proposition of Mr. Dietz was a good one.

M. G. Morel said it would be very difficult, not to say impossible, to find professors capable of accomplishing this task.

Miss Beale moved to seek a general formality for grammatical terms.

M. Spruyt supported M. Dietz's proposition, and urged that two diplomas for education in languages should be established; one for elementary classes, where at the same time the professor taught the national language, and the other for superior classes, where the professor taught only the foreign language.

The proposition of M. Dietz being put to vote, was rejected. That of Miss Beale was adopted.

Mr. Widgery offered the following resolution:

"A master of living languages should possess a knowledge theoretical and practical of phonography."

Mr. Stanley followed the speech delivered in English on this occasion by Mr. Widgery. Knowledge of phonography was necessary to teach pronunciation in a rational way. Mr. Widgery's proposition was adopted.

M. Michel Bréal ventured to remark that by "living languages" was meant ordinarily English and German. Without wishing to object to the choice of these two languages, he regretted that languages no less worthy of study were set so completely aside, particularly Italian and Spanish, two beautiful tongues, which opened access to grand literatures and which French women of the seventeenth century knew so well. Especially in the instruction of young girls, principally in the south of France, Spanish and Italian would be in their place. We would be certain, at least, to arrive at a result, and not leave the study half way. While listening to the directress of

the Lyceum of Milan, who entertained us with the rapid progress in French made by Italian students, he thought our young French girls should no less acquire the Italian. Because one thing is relatively easy is no reason why it should be dispensed with. He wished we could talk Italian and Spanish in France just as we have heard our Spanish and Italian colleagues express themselves in French.

On the proposition of the president, the visit to the Exposition under conduct of M. Bonet-Maury, was fixed for Saturday, August 10, at 2 o'clock, the rendezvous being at the Palace of Liberal Arts.

SECOND QUESTION STUDIED BY THE SECTION OF SUPERIOR EDUCATION.

INTERNATIONAL EQUIVALENCE OF STUDIES AND DEGREES.

M. Cart read his report.

First. It is proper to establish international equivalence of diplomas and certificates declaring the studies of secondary education required as condition of admission to studies of superior education of various orders.

Second. It is proper to recommend as a useful international practice the concession to the students of the right to accomplish in a foreign university a portion of their course.

Third. It is proper to adjust, after valuation of the titles gained and without distinction of nationality, the international equivalence of certificates of examination and of degrees from a scientific standpoint, and as condition of the pursuit of a higher degree.

First resolution.—M. Himly proposed to satisfy a desire expressed by the rector of Brussels by saying, "It is proper to establish everywhere."

M. Gentet proposed to insert, "It is proper to maintain or to establish."

Mr. Stanley asked if the resolutions adopted by the Congress would not be officially communicated to the foreign universities.

The Congress decided that this question should be subsequently renewed.

The first resolution, as amended by M. Gentet, was unanimously adopted.

Miss Beale proposed the creation of an international society of secondary education. The president decided to refer this question to the following session.

Second resolution.—M. Bufoir remarked that the authorization asked existed in Germany.

M. Erkelenz stated that it existed only for doctors and philologists.

The resolution being put to vote, was adopted.

Third resolution.—M. Cart stated that the Congress only demanded authorization for students to present themselves for superior examinations. It did not seek professional trainings, but only to obtain degrees.

A discussion ensued between MM. Himly, Bufoir, Colmet de Sauterre, and several other members, on the equivalences to accord from the standpoint of study of letters and of law.

It was observed that the proposition absolutely reserved all the rights of each faculty.

The proposition being put to vote, was adopted unanimously.

M. Bufoir proposed to explain that France was the only country where fiscal conditions were imposed for delivery of certificates of equivalence. He hoped in pointing out that fact the situation would change.

M. Gentet moved that the report should state the fact that the propositions were voted unanimously. Adopted.

On motion of Mr. Stanley, the section was unanimously requested to make known the propositions on international equivalence of studies and degrees to all the foreign universities.

The session adjourned at half past 11.

GENERAL ASSEMBLY OF AUGUST 10, 1889.

The session opened at 9 o'clock.

The order of the day was the discussion of the following questions:

First. Limitation and sanction of secondary studies. (Baccalaureate and certificates of maturity.)

Second. What place should be assigned to economic and social sciences in the programme of superior education?

FIRST QUESTION EXAMINED IN THE SECTION OF SECONDARY EDUCATION.

LIMITATION AND SANCTION OF SECONDARY STUDIES.

M. Egger read his report. The first conclusions were adopted, namely:

(a) It is necessary that secondary studies have a sanction.

(b) The best mode of sanction is that which permits the conscientious student, of average intelligence, to obtain the final diploma without special preparation and particular efforts, in following simply the regular course of studies.

A third resolution was contributed, thus:

"Whatever be the mode of sanction adopted, count should be kept, for obtaining final diploma of studies, of the anterior notes and of the classing of the students in the establishment where he has made his studies."

The rector of Montpellier considered the formula too absolute, because of inequality from the standpoint of studies, of private establishments, colleges, and lycées.

M. Chappuis moved to replace the words "should be kept" by the words "it is desirable, if possible, to keep."

The resolution, with the new wording, was adopted.

M. Blanchet moved the following view:

"Candidates should be judged by a jury composed of their professors, to whom should be added a delegate of the State."

M. Chappuis recalled the discussion which had taken place in the section, which concluded to reject that view.

M. Lichtenberger thought there would be advantage in adopting it. He believed it possible to reconcile the rights of the State with the freedom of education, and he urged that we place ourselves upon the standpoint of pure pedagogy.

M. G. Morel replied that the value of *personnel* was too unequal in the various establishments to admit of an interior jury.

Dr. Lagneau suggested that numerous partial examinations should be undergone before the special examiners, so that count of notes could be really kept.

M. Pigeonneau remarked that the possibility of the constitution of an interior jury was implicitly indicated in the second view. He thought it was not proper to bring it out more distinctly and forcibly.

M. Urechia urged that the baccalaureate-conferring rights should be held to the second proposition of M. Pigeonneau. The question presented the same difficulties in Roumania as in France.

The president closed the discussion and moved to go on without resolving. Adopted.

The section likewise pronounced the view that the three sanctions permitted for the three types of secondary education should afford access to the different orders of superior studies, each one following the nature of the secondary studies which it crowns. Adopted.

M. Herzen moved that they specify the careers to which each of the three afore-said sanctions led.

M. Urechia thought this would trench upon the domain of superior education. The autonomy of superior schools demands that no view should be pronounced on the point touched upon by M. Herzen.

M. Herzen feared that three keys had been manufactured, one of which opened all the doors of the faculties, while the other two closed them.

The president replied that special locks would be fabricated.

SECOND QUESTION EXAMINED IN THE SECTION OF SUPERIOR EDUCATION.

WHAT PLACE SHOULD BE ASSIGNED TO ECONOMIC AND SOCIAL SCIENCES IN THE PROGRAMMES OF SUPERIOR EDUCATION?

M. Blondel reported orally.

In view of very diverging opinions, on motion of M. Dreyfus-Brisac, it was decided to offer the following resolution.

"The section is of opinion that it is proper to bestow on economic and social sciences a much larger place than heretofore in superior education."

The section resolved itself into an inquest on the actual condition of the situation in various countries represented in the congress.

M. Geiser, of Zurich, and the Marquis Alfieri gave certain information to the congress on this question.

M. Medveczky approved the view expressed by the section. Without asking a positive vote, he believed in the possibility of establishing for social sciences a complete system of education leading to a sanction (degree).

After a brief discussion, in which MM. Urechia and Rosenfeld participated, the view of the section was adopted.

The president, in a speech frequently interrupted by applause, gave a résumé of the labors of the congress and their importance.

Several foreign members, MM. Laskowsky, of Switzerland; Stanley, of England; Basiadis, of Greece, and Madame Griseri, of Italy, replied to the president's speech, thanking him for the high competence and exquisite courtesy which he had manifested in directing the debates. They offered their thanks to the Government and the French people for the wide and generous hospitality they had received. Notably, the Marquis Alfieri declared that, whatever might be the political events, Italy would always and most deeply be grateful to France for all that France had done for her.

The president then informed the members of the congress that they would be received, on presentation of their cards, to the "punch of honor" to be given by the minister of public instruction to-morrow (Sunday) evening, at 9 o'clock.

The president thereupon declared the congress closed, and the session adjourned at a quarter past 11 o'clock.

The following is the complete text of the address delivered by M. Gréard at the closing of the congress:

The session of the congress has been long and laborious. I am confident that it has been fecund. You have exchanged observations on all the questions submitted. On some you have reached conclusions ready to be put in application.

The secondary education of young girls was not that which least occupied the congress. That was just. Is not the last born the most delicate? Two points spring from the general ideas you have debated and the discussions you have touched upon; the first is, that the education of young girls should not be intended as a superficial ornament; that for them, as for young men, the object sought to be accomplished should be at once the acquisition of a certain amount of well-digested knowledge and the culture of the faculties; the second is that, if we may not refuse aid to women capable of raising themselves above the ordinary standard, secondary education, addressing itself to the average mind, should seek its guide in the conditions of time, of health, of the social situation, and of aptitude common to the greatest number, aiming to prepare young girls for the family life, of which they are destined to become the moral support and charm.

For secondary education of young men, considering the mass of knowledge accumulated by the programmes of all countries and the impossibility of teaching it all to all uniformly and encyclopedically, you have recognized the necessity of modify-

ing and diversifying the types of lycées or secondary schools. You have meantime loudly proclaimed the duty of maintaining, while fortifying it, the standard based on the knowledge of two superior classical languages—the Greek and Latin—the study of which has been so long the thinking cradle of humanity, and which to-day is again the bond of the intelligence of the *élite*.

But at the same time it has appeared to you that, side by side with this régime of pure classic, it was not impossible to constitute, for those who have need to reserve a portion of their time and force for different instruction, another form of secondary education reposing upon the profound knowledge of a single ancient language, that which is brought near to us more by its grammatical parentage than by the ideas of which it is the interpreter—the Latin tongue. You have likewise thought that in a state of civilization which has so many wants and so many interests to satisfy there was room also for secondary instruction, where the national language, combined with the study of living languages, should be the basis of education. Modern education, “real” education, as some wish to call it—the word signifies but little when its true character is agreed upon, which is for this as for the other two—disinterested culture of the mind.

In the course of the discussion you have met more than once the question of the method to follow in instruction in the living languages, some insisting more particularly upon the necessity for acquiring, above all, practical possession of the language; urging the advantages which young men and young women, for their general culture, would obtain in the perusal of the great works of foreign literatures, finally convincing all that a living language was not only made to be spoken, but that a language which is spoken need not fail to serve that other intercourse, none the less precious—communion with the sentiments and ideas of those who have left to us in their works the better part of themselves.

The baccalaureate provoked contradictory argument. That one sanction of secondary studies is indispensable; that this sanction should be the natural result of a regular course, of a series of well-made classes, that it was proper to keep count of notes merited by the candidate at the end of his scholastic life—on these points you have readily agreed. On the question of the jury impaneled to deliver these sanctions, you have hesitated to pronounce in presence of difficulties which might arise from liberty of instruction in the countries where it is established. But the result of the debate was that the countries of baccalaureate, or of examinations undergone before juries other than the juries composed of the usual masters of the candidate, had something to do to arrive at a course of studies more satisfactory in its direction and less uncertain in its results.

The questions propounded for superior education were of high character. On the place to make for social sciences, the Congress hardly went beyond a sort of inquest. That inquest produced most interesting results, of which our report will preserve the remembrance. You have gathered among other things views and projects on organization which will afford weighty thought to all minds anxious for the moral future of the world.

It was easy to reach conclusion on the examination of the international equivalence of studies and degrees. Discarding from the question all that had reference to the practice of professions to which the grades might lead, and all that which touched upon the interests of the state, you have given preference in the pure order of studies to a doctrine liberal and wise, a doctrine which throws down useless and hurtful barriers without striking a blow at the necessary authority of great academic associations or universities charged with the protection of high education. You have opened the road to reconciliation, to communication, to reciprocal sagacity for the greater elevation of science and the sentiments of confraternity which it awakes and cherishes.

If your labors had terminated only with this resolution, it would have sufficed to mark their character and justify their utility. There are nevertheless minds cha-

grined, or rather, so to speak, a little skeptical, who ask of what use is the Congress? Should it not have promoted as soon as possible an exchange of documents where each would have found that which he sought? The document plays to-day a considerable part in your studies; it must not be belittled; it prepares, it brightens, it completes the discussions. But can anything except these living communications give to the mind the warmth, the strength, the seductions of speech? The conferences, necessarily somewhat hurried, such as we have had within the limit of time accorded us, can hardly supply the precision of a book, and I do not doubt but that in our reports many inaccuracies and also many contradictions of detail will be found. That which was of importance was to establish the principles which are the light and the soul of things, and you have established them. I repeat, it is not documents, nor yet books, that can produce the sympathy to which the discussion gave birth, among those who have reunited elevated interests.

A common thought manifested itself more than once in your deliberations—that it was desirable that all the resolutions adopted should be communicated to all the corps that they touched; that the study to be followed should be conducted to the end by the persevering effort of all countries, and in one word that the international bond which you have forged should be maintained, extended, and fortified. You have confided to your bureau the task of accomplishing this desire. It will not be our fault if it be not realized.

REPORTS.

SECTION OF SUPERIOR EDUCATION.

THE INTERNATIONAL EQUIVALENCE OF STUDIES AND DEGREES.

The section of superior education has been engaged upon the question of the international equivalence of studies and degrees. Its task was specially facilitated by M. Bufnoir, professor at the Faculty of the Right at Paris. It only remained, in the discussion, to follow the identical order of questions propounded by M. Bufnoir at the close of his labor.

The session of Wednesday morning was devoted wholly to ascertaining the system adopted by the several countries represented at the congress.

M. Collard, for Belgium; M. Gaudenzi, for Italy; M. Laskowsky, for the Swiss-French; M. Ferrari-Perez, for Mexico; M. De Medwsky, for Austro-Hungary; M. Philaréto, for Greece; Ibrahim-Mustapha-Bey, for Egypt; M. Van Hamel, for Holland; Mr. Stanley, for England; M. Urechia, for Roumania, and M. Giner de los Rios, for Spain, spoke successively, as well to give information as incidentally to express their opinions concerning the true basis of the question.

It supervened, from their statements, that nearly all of the foreign countries required for admission to the universities a diploma verifying the real secondary studies, and that all universities, very broadly and without any pecuniary requirement, granted access to those foreigners who were the bearers of a diploma analogous to a national diploma. Authority to take the course is granted by the competent faculties, sometimes in each particular case, sometimes and more generally, by reason of a superior decision, covering all, and which confers an actual right upon the bearer of the foreign diploma.

Concerning the curriculum completed in part in a foreign university, the majority of the countries were, with certain restrictions, very favorable to that practice.

From the professional standpoint, the foreign degrees, and among others, those granted by the Faculties of Law and of Medicine, are not generally recognized, unless under the reservation of a complementary examination relating more especially to professional points; for example, in medicine proof of practice is required, such as examination as to a disease or a surgical operation, and questions on pathology are asked.

It seemed to be evolved from this morning session, a session more of statement than of debate, that an unanimous tendency existed to make it very easy for foreign students to gain admission to the several universities. The question became complicated, since in the evening session and that of the following day, examination was had concerning the reservations under which a foreign student should be admitted, and how and by whom the equivalence of a foreign diploma with a national diploma should be adjusted.

It appeared to some that the system actually in force in France was sufficiently liberal; it was important that the equivalence should not be adjusted by the Government until after the advice of the competent faculty; by that, on one hand, guaranty was obtained of a sufficient preparation, and on the other hand the task of the Government was facilitated in the instance where it was deemed proper to refuse the equivalence.

Others thought that this system afforded too much room for arbitrary action, where a favor, not a right, was granted. They feared that the foreigner, being never assured of obtaining this favor, would be but little encouraged to frequent a foreign university. It seemed necessary, once for all, to recognize the value of this or that diploma from the special standpoint of admission into the several faculties, and thus give the foreign student guaranty that, on his arrival, the right to regularly enter his name would not be contested. It would not be, then, each faculty which would decide in each particular case; a competent commission would be charged with the examination of the various certificates, and would recognize their value in a definite manner; providing always, which goes without saying, that the foreign diploma should suffer no restriction.

Others again, in greater number, declared that the foreigner should be admitted on the sole condition of producing proof of the preliminary studies, required in his own country for admission there to studies of superior education of the same order.

This last solution appeared hardly possible unless under the exception that the foreigner, having obtained his degrees on these conditions, could practice only in his own country; in effect, the foreign requirements being possibly less on entrance, there would ensue in respect of natives an inequality of treatment truly unjust.

In return, it was observed that in the case where the diploma would be recognized as valuable only for the foreigner, there would be a strong chance of its having for the foreigner only a mediocre value.

Four opinions were thus presented:

Examination in each particular case by one competent faculty.

Examination of foreign diplomas by a competent commission, which should decide on their value.

Admission to the faculties of foreign students on the sole condition of producing proof of the preliminary studies required in their own countries for admission there to superior studies of the same order, with the exception, always, that the diplomas conferred on these conditions should be of value only to the foreigner.

Admission, without any reservation, to foreign students under the conditions above named.

The conflict of ideas made the light flash out; but when too many ideas are presented, the light becomes too bright and blindness ensues. The discussion threatened to become endless.

M. Gavard, councilor of state, of Geneva, urged that we should not enter too much upon details; that we should hold ourselves simply to the first line of section 2, of the report of M. Bufnoir, slightly modified, and that the following conclusion be adopted:

The congress, considering that there is much advantage in making it easy to students to frequent foreign universities, declares:

It is proper to establish the international equivalence of diplomas or certificates defining the studies of secondary education required as condition of admission to studies of superior education of various orders.

This proposition was carried by a large majority, but quite a number abstained from voting.

Before the vote was taken the congress rejected, as not being within its authority and as impossible to satisfy, a desire of M. Casanova, professor at the University of Madrid, who requested the congress to name an international commission which should propose the best manner of arriving at the equivalence and reciprocity of diplomas, based upon uniformity of programme and studies.

After a brief exchange of views, the second question propounded by M. Bufnoir in his report was unanimously decided in the affirmative. The section requested the congress to declare: It is proper to recommend, as a useful international practice, concession to the students of the right to achieve in a foreign university a portion of their term of study.

Concerning the third question propounded by the reporter and comprehended in the following terms: "Is it desirable and possible to establish the international equivalence of degrees, whether it be from a scientific standpoint, as condition of seeking a higher degree, or from the professional standpoint?" the section immediately discarded the words "from the professional standpoint. It appeared useless to engage in a discussion which afforded no opportunity to reach conclusion, in view of the great difference of conditions required in various countries for practice of a profession.

The first part of the question could not be determined in the affirmative except under certain exceptions.

In effect, if, for the examinations which terminated the secondary studies and opened access to the faculties, it was desirable and possible, in view of the great analogy of these examinations between themselves, to establish an international equivalence, it would be in turn vexatious and difficult not to leave to each faculty the right to judge whether this or that examination passed by the foreigner equaled or not that which it required. On the other hand, several members of the section having observed that in France they readily granted equivalence to foreigners, but refused them generally to the French themselves, the section adopted unanimously the following draft, which it proposed to the congress:

It is proper to adjust, after valuation and without any distinction of nationality, the international equivalence of certificates of examination and of degrees from a scientific standpoint and as condition of the pursuit of a higher degree.

Before proceeding to take this vote the section refused, as precipitating itself against insurmountable obstacles, to discuss a proposition made by M. Urechia, delegate from Roumania, former minister of public instruction, in which he expressed the desire that the University of France should take the initiative in bringing together an official congress where all the universities should be represented, and that this congress should determine the minimum of attainments required for the various degrees. It should conclude also to found a university federation, which should be permitted to solve by a practical method all the questions attached to the equivalence of studies and degrees.

Finally, the section of superior education, considering that there was advantage in facilitating to students the frequentation of foreign universities; and considering, on the other hand, that it became necessary, in maintaining the standard of studies, to admit to the faculties only those students furnishing guaranty of sufficient preparation, proposed to the congress the following resolutions:

It is proper to establish the international equivalence of diplomas or of certificates defining the studies of secondary education required as the condition of admission to studies of superior education of various orders.

It is proper to recommend, as a useful international practice, concession to the students of the right to achieve in a foreign university a portion of their period of study.

It is proper to adjust, after valuation of the titles gained and without any distinction of nationality, the international equivalence of certificates of examination and of degrees, from a scientific standpoint, and as condition of the pursuit of a higher degree.—TH. CART, *Reporter*.

OF THE PLACE OF SOCIAL SCIENCES IN SUPERIOR EDUCATION.

The section of superior education having examined at its last session the following question, of the place of economic and social sciences in superior education, one of the members present, Rector Van der Rest, made the passing remark that the words "social science" were entirely sufficient.

To facilitate the discussions which could hardly fail to arise on a question so complex, and which the remarkable report of M. Boutmy was of a nature to provoke, the president considered it his duty to divide the question submitted into four paragraphs, as follows:

First. Does there exist anywhere an education organized to teach both economic and social sciences? What does this education comprehend? What is its sanction? What are the preliminary studies required for pupils admitted to follow it?

Second. Is it proper to recommend the organization of such an education? What should it comprehend? What should be its sanction? What preliminary studies should be required for pupils who may desire admission to this course?

Third. Can such instruction find place in the framework of actual university education? Should it be assigned to a particular faculty? Should the various faculties selected to teach it be required to contribute in common or should it be distributed among them?

Fourth. Is it not proper, in every case, to recommend, in the faculties of law, the development of education in the various branches of political economy? This instruction once developed, could it not be usefully combined with that of various branches of the public law, in a manner to constitute an assemblage of studies adapted to the wants of young men who are destined for administrative careers, diplomatic or consular functions, and for public life?

On the first point it was acknowledged at the outset that no part of the instruction in social sciences was given with the full amplitude it deserved. But very useful information was imparted by various members on that which had happened abroad. Thus, the Marquis Alfieri told us of the school he had founded at Florence in imitation of the school of political sciences directed by M. Boutmy.

This school gave seventeen courses, of which about one-half were judicial; also that a notarial school was annexed. Speaking of the difficulty of reconciling the professional class with the purely scientific class, M. Alfieri admitted that the latter had been somewhat sacrificed. It was the professional class which had been taken only into consideration. He said they had for pupils young men of the leisure classes, destined for public functions or wishing to enter upon public life; they were given a thorough practical education which does not enter the faculties of law where the course of political economy has rather a scientific and theoretic character.

The school of Florence grants a diploma equivalent to certain university diplomas required for access to a great number of careers, notably the diplomatic career. It serves, besides, as a strong recommendation for occupation in other employments. The school has received the privilege of civil personality, and to follow the course one must have a bachelor's degree.

M. Gaudenzi added several interesting statements concerning an analogous school less complete, which had recently been founded at Bologna through the initiative and under the direction of Prof. Montovani Occadi, but which is directly attached to the university. Professors of the university gave the instruction, and this instruction, which was reduced to three courses, is simply complementary to that given in the faculty of law.

M. De Medveczky, professor from Buda-Pesth, spoke of Germany and Austro-Hungary, where education in social sciences is given in the universities, sometimes in the faculty of philosophy (which is the rule in Germany), sometimes in the faculty of law (which is the rule in Austria), and sometimes in a special faculty.

It could be said that the students who were engaged in social sciences almost

always followed the courses in several faculties, and most of these considered substantial judicial knowledge to be the indispensable foundation for these studies, which are crowned by a special doctor's degree in political sciences.

M. Georges Hulin followed these declarations by indicating the number of courses made in various cities, particularly at Berlin. It seemed to him that a majority of the students considered these studies as an addition to other studies and pursued a disinterested work.

Prof. Van Der Rest entertained us with a project recently adopted by the University of Brussels, where education in the social sciences was to be established by making appeal to the professors of all the faculties.

The investigation to which the president invited the members of the section was therefore very interesting and instructive, and of a nature to prepare for the solution of the grave problem propounded to us.

On the last three paragraphs we could do no more, however, than to formulate (on the proposition of M. Dreyfus-Brisac) the following view: "The section is of opinion that there is room to give a larger place in the courses of superior education to studies in economic and political sciences than has been given to them in the past."

The trouble in arriving at a more precise solution was owing to the existing difficulty of defining the expression "social sciences," where all that touched upon the history of the development and study of the constitution of human societies could be embraced.

Further, the question submitted to the deliberation of the section was put in special terms a little delicate for France, and perhaps for that reason the number taking part was less numerous and the discussions were more timid.

M. Van Der Rest also protested energetically against a passage in M. Boutmy's report (page 59), declaring that political economy had no right beyond that limited to special reports, almost sterile for itself, and not very fruitful for the other group of science.

Prof. Urechia gave some details of the effort attempted in Roumania. Recently in that country a free school of social sciences had been created, largely taught by professors of law, assisted by young Roumanian doctors or foreigners. This school delivered no diploma, but only a certificate of completion. The Government always accorded the preference in appointments to the young men who were graduated from that school. Various propositions were made without reaching a vote, some a little distrustful concerning university education (without distinction of country), preferring the creation of special schools. It was believed, at least, that only such schools could give education in social sciences a truly practical character.

Others, on the contrary, thought that the university frameworks should be enlarged so as to afford hospitality to new courses of study. These courses were too numerous and too varied to find place in the programme of our faculties of law. It was necessary to make appeal to professors belonging to different faculties. Some members of the congress seemed inclined toward the creation of a special faculty, such as existed in Munich and Tubingen. But are social sciences constituted sufficiently solid and clearly enough defined to warrant the easy acceptance of this solution; and besides, is augmentation of the number of faculties desirable?

In the brief space of time placed at its disposal the section was not able to reach precise conclusion on these diverse points. It has, therefore, confined itself to the general view which I have had the honor to present. But before separating, the section felt it incumbent to testify to its president, M. Bufnoir, the expression of its gratitude for the zeal he has displayed, and the ability with which he has directed the debates.—G. BLONDEL, *Reporter*.

SECTION OF SECONDARY EDUCATION.

OF THE PART TO GIVE SCIENCES IN THE SECONDARY EDUCATION OF YOUNG GIRLS.

MR. PRESIDENT, LADIES AND GENTLEMEN: At the inauguration of the deliberation on this subject a general question was proposed: Ought young girls to be taught all they can learn? And since they are recognized to be as apt as their brothers in the same studies, should they be admitted to the same school to receive instruction in common?

Should, on the contrary, account be taken of the differences of temperament and of vocation, and an outline drawn of studies particular to the feminine sex? The section of congress in the name of which we speak is agreed not to erect any barrier, and to open widely the doors of the universities; the young girls who cultivate their aptitudes will go there to win their degrees, and we believe that we can depend upon their good sense for the use they will make of them.

But this superior education will never be demanded except by a few pupils; the larger part leave the colleges and lycées at the age of 16 and reënter their families to which they are soon called by other duties. This consideration and that of health, and of the delicate physique and morale of the pupil, have led the majority to adopt the second of the two systems; to give young girls an appropriate education which will clear their minds, leaving nothing vague, and rendering them stronger and more intelligent, prepare them to fill their places in society.

Our assembly was thus led to select from the sciences those which could serve to attain this end, but without ever disproportioning the effort and the force of the pupil.

Thus we urge mathematics for disciplining the mind and initiating in method. Algebra, which simplifies the difficult questions of arithmetic, raises education from the particular to the general, and gives precision to the other sciences; geometry, accustoms one to see and to reason justly. It is the bond between the abstract sciences and the arts; cosmography brings clearness to geographical studies and interests the pupil in the fine order of the universe.

These three sciences will take their place in our education, and we will answer the questions propounded in the report of M. Darboux, in proposing to the congress the adoption of the following conclusions:

First. It is good to give young girls in the lycées lessons in algebra to elevate the standard of the education they receive, and because in certain cases, notably in arithmetic, algebra constitutes a simplification.

Second. Education in geometry should aim at development of the mind; the professor will interest the majority of the pupils in it, provided, its application is shown as soon as possible.

Third. The division of cosmography into two parts—one attaching to geography, the other explaining the appearance of celestial phenomena—should be maintained.

These conclusions being adopted, the method for instruction in the physical sciences and the choice of persons to teach it were prescribed. The method should be inductive and experimental, permitting initiation of the pupil into all the branches of physics, notwithstanding they now comprise many distinct sciences. The limits will be reached only when one can not with their aid foresee or verify results. Mathematical demonstrations should be necessarily proscribed, and all theory beyond the ability of young intelligences should be carefully discarded.

The only conclusion to present to the congress is that which best expresses the following thought:

“Education in the sciences should, above all, be experimental.”

The science preferred by young girls is natural history. Study of animals and plants excites their curiosity and develops their faculty for observation, while knowledge of the human frame appeals to their minds and hearts. Hygiene is an addition to these physiological studies, and so far from detaching it we ask the con-

gress to approve in a last conclusion that "hygiene should always be connected with the natural sciences, of which it is the application."—Madame MOURGUES, *Reporter*.

OF THE METHOD TO FOLLOW IN SECONDARY INSTRUCTION FOR EDUCATION IN THE
LIVING LANGUAGES.

Discussion was had on the report of M. Bossert on the method to follow for teaching living languages in the secondary establishments for young girls. The majority of the congress were of opinion: First, that practical education in living languages should commence as early as possible; second, theoretic education should be deferred until the first elements of grammar in the maternal languages shall have been acquired.

I. Practical education should commence early. First, the child becomes familiar with strange sounds, and easily learns the pronunciation of strange words; second, the study of vocabularies, which Miss Beale justly called the gymnastics of the language, is made without much effort after constant repetition, and in due time the child will learn well.

This practical teaching should, above all, be oral. The pupil will learn to talk, being accustomed to hear a foreign language spoken. However, it is evident that it becomes necessary to give the pupil certain grammatical ideas, without which she can not talk correctly. But it takes time, much time, for this. It is necessary in our establishments of secondary instruction to teach English or German as soon as possible, say at the age of 8 or 9 years. It is also necessary, and the professors of languages will demand it before long, to devote at least a half hour each day to the study of a foreign language by the elementary classes. This will only be two hours and a half per week, while in England and the United States six hours a week are devoted to the study of living languages.

II. Theoretic education, properly called—that is to say, the study of syntax, of comparative grammar, and the study of foreign literatures—should be entered upon as soon as the pupils have learned to express themselves with more or less facility, say at the age of 12 or 13 years, when, for example, they have surmounted the elementary difficulties of their own language. Theoretic education starting at that age should be employed largely in the study of living languages. It does not suffice, in effect, only to take one or more foreign languages. The study of languages should not have simply a practical aim. It should be a means of education; it should develop intelligence, elevate the soul, and enlarge the circle of information. It should replace, for young girls, the study of the dead languages. By comparative grammar they learn the grammar of their maternal language better. By translation they become accustomed to express new ideas in their own language. By exercises they apply the rules of syntax. Besides, it becomes necessary, selecting by preference from the modern authors, to initiate young girls into the chief works of foreign literatures, especially those who have acquired sufficient maturity of mind and a knowledge of the foreign language sufficiently profound to comprehend their beauties and their delicacy.

In almost all countries pupils study two or more foreign languages, while in France either English or German is studied. If instruction in the living languages commenced earlier we could, after three or four years of study, teach a second language without in the meantime neglecting the first; besides, many pupils study a second language at home because they can not learn it at the *lycée*.

Further, we say that practical education and theoretic education each possesses particular importance. Practical education, addressing itself rather to the memory, to the versatility and flexibility of the organs, should precede theoretic education, which calls in play the faculties of reasoning and analysis.

But (and all agree on this point) study of languages will be truly fruitful only where it is made attractive, so that on leaving our schools pupils may continue to read

English and German books and visit the countries whose languages they have studied, as do those of our pupils who pass their vacation in England or the foreigners who come in large numbers each year to study our language and our literature.—Madame SOULT, *Reporter*.

OF THE VARIOUS FORMS OF SECONDARY EDUCATION, WHAT SHARE IN THE CLASSIC LANGUAGES, THE MODERN LANGUAGES, AND THE SCIENCES IS SUITABLE TO EACH?

Before entering upon the study of the forms of secondary education we are confronted with a preliminary question as to the age at which we should commence to give secondary classic instruction, so called, comprehending the study of ancient languages. Prof. Herzen proposed that this "union between primary and secondary education should take place only at the age of 14 completed." He saw here "a triple interest, pedagogic, individual, and social." The instruction should be given to selected pupils only, concerning whom time had been afforded to make a very thorough intellectual examination such as is practiced at the College of the City of New York. By this means the professors, dealing with the more mature pupils, taught more readily and with greater chance of success. This was the pedagogic interest. They would have only capable and choice pupils and therefore the more docile and studious. This was the individual interest. The "no accounts" thus eliminated from the classic education would be directed toward their true path, toward more practical studies. This was the social interest.

A large majority of the congress endorsed the opinion of M. Bréal, that the system commended by M. Herzen would lead to overpressure after the age of 14. Already, in France where the study of Latin is no longer commenced before the age of 11 or 12 years, there is connection between this crowding of the of ancient languages and overpressure. It is because they managed to contract these studies into a less number of years that this surcharge is produced. In deferring these studies until the age of 14 years, the overpressure will be augmented. The majority agreed also, with M. Croiset, that Greco-Latin studies, to be fruitful, should be conducted more leisurely. In this way only the pupil will read the authors, and enter by direct and prolonged contact into the understanding of ancient ideas. Since these studies are not to be commenced before the age of 11 or 12 years, their force has diminished; what would it be if retarded until the age of 14? Finally, MM. Harlaux and Hurdebise demonstrated that the selection proposed would, in consequence, operate in many countries to transfer the eliminated pupils into the private schools, where they would find the classic culture which had been denied them by the State. This would result in diminishing public education.

This being settled, the following principle was pronounced without contest:

"It is proper to recognize and in consequence to establish several forms of secondary education."

Under this principle, we agreed to recognize a certain number of forms and to mark their general character. We commenced by the less modern form, the most elevated, that which rests upon education in the two languages. The necessity was understood and expressed in these terms: It is proper to maintain simultaneous and obligatory Greco-Latin education.

The majority rejected the idea of a facultative Greek education proposed by M. Herzen. It declared that all facultative education is a balance given to overpressure, if it finds followers, and the chances are against finding them; besides, a pupil well endowed, succeeding in Latin has no reason for not succeeding in Greek, so long as count is taken of the somewhat greater difficulty attaching to the latter language. (See résumé of M. Croiset.) Other reasons were also given. "We are unable to discard the Greek from any true classic education," said Prof. Stanley, "since the aim of classic education should be to develop the mind in attaching the filiation of ideas and the progress of civilization to their Greco-Latin stock. For the ideas and

form of classic literature, that which emanates from Greece is not only of great value, but is also the origin of that which is transmitted to us by means of the Roman civilization." "We can not," said M. Cart, "teach Greek facultatively in the same establishment, for Latin can not be taught to those who pursue the Greek studies in the same fashion as to those who omit Greek."

We subsequently defined a second type of education, founded on the study of a single ancient language, specially intended for young men who seek scientific careers. On the choice of a single ancient language the partisans of the Latin were not put to the trouble of obtaining precedence for their cause. A lycée of purely Greek type, proposed by M. Basiadis, had no success with the majority of the countries. "They contemplated in Germany," said M. Erkelenz, "making an examination, but never had they dared to go as far as the execution." Briefly, the following principle was adopted:

It is proper to admit a second form of secondary instruction where but one language, the Latin, is studied.*

In the designation of this form of education the word "classic" was suppressed. This suppression was the almost necessary consequence of the remark of Mr. Stanley on the classic value of Greek, already cited; and by this is made known definitely the desire to see the word "classic" applied to the first form in the official programmes. Incidentally, and in further considering the terminology of studies, the opinion was expressed that the word "humanities" suited two forms, which are to be defined, whether it be desired to call them, as in Belgium, "Græco-Latin humanities and Latin humanities," or whether they are given, as at first, the name of "classic humanities." But this term "humanities," of wholly Latin origin and idea, should not in any case be applied to an education which did not allow the study of any ancient language.

Without leaving the two forms of education, of which the characters were sought to be established, the proportion of the living languages and sciences suitable for each was considered. For the sciences and in the sciences, for pupils seeking scientific careers, everybody accepted the ideas expressed by M. Croiset in his preparatory report. "To prolong the period of literary studies," said he, "is to prolong the period of culture generally and widely; it is to keep back the time when absorbing specialties shall dominate; it is to lead to the study of sciences, minds more mature, more open, more supple and better prepared to understand them well."

For pupils intended for literature, everybody recognized, with M. Croiset, that "the sciences address themselves to certain intellectual faculties which should receive a sufficient culture and exercise on the part of all pupils." We have, therefore, pronounced in the following terms: In one or the other of the two types of secondary education already recognized, the study of sciences, always being subordinated to the study of literature, should be made seriously—that is to say, in a slow, gradual, and methodical manner; for pupils intended for scientific careers, the separation, and consequently the specialization, should be made as late as possible.

* In the course of the discussion on the second type of education, M. Bréal made an observation as to detail, which did not call for vote of the Congress, but to which its importance obliges us to refer. As he said, the idea of this education is good, but it is necessary to examine well how we can create it. First, for the very purpose, *ex nihilo*, we announce to families the opening of establishments where we teach only Latin, French, the living languages, and the sciences; this will be the best mode of procedure. Second, addition would be made of Latin to the courses now deprived of it, as our secondary special course which is a most difficult matter. Third, by retrenchment, establishments of the Græco-Latin type will be chosen, and it will be said, "from to-day, the Greek will be suppressed here;" a dangerous proceeding, for like establishments will consider themselves attacked; Latin will here be compromised, and the personnel will find themselves belittled and become discouraged; the experiment will not succeed.

On the question of living languages the following formula was finally agreed upon:

It is proper to teach the living languages practically to elementary classes, but in a more literary method to superior classes.

On this point it was clear that the more the pupil develops and interests himself in the ideas of the Greeks and Romans (in a word their literary life) the more is he in the way of claiming an analogous interest in the living languages. But when should this begin? To a proposition of M. Gauthiot, which aimed to put back to the farthest the inauguration of these studies, upon the reasoning that the pupils would retain only that which they had learned at the close of the teaching, the answer was made: The study of the living languages must not give way for one-half of the classic studies with the view of doubling the hours which will be devoted to the former in the superior classes. Are we sure, in effect, that the pupil forgets so quickly? Being younger, does he not possess more facility to retain the words in his memory and to pronounce them correctly, thanks to greater suppleness of his organs? It remained to specify that which is understood by practical teaching.

Two opinions were presented; some, considering that reading was the most elevated aim, relegated to the second place the art of writing and speaking. They agreed with M. Rabier that reading was the more important usage, more fruitful from the intellectual point of view and likewise from the practical standpoint. By reading one becomes acquainted with books, reviews, newspapers, and all that concerns the literary, scientific, or commercial movement of a people. In life one finds the occasion, the desire, or the duty to read more frequently than to write. Others contended, with M. Bréal, that the possession of a living language should be active, that the use of the theme or the version is often exaggerated, that the best professor is he who does not pronounce before his pupils a word of their native language. From the international standpoint it is certain, contended M. Bréal, that students accustomed to talk during their sojourn at the lycée, will acquire a desire to perfect themselves in the foreign language, not alone to make themselves better understood by a hotel proprietor or a guide, but to follow with profit the university courses, chat with the masters, and generally with all those persons acquainted with the country in which they travel. These two opinions could be reconciled, and were summed up by Vice-Rector Gréard in the following formula, which was adopted:

There are two things necessary to acquire in the study of living languages—the possession of a language and the most elevated literary intelligence.

Finally, a third type of secondary education was recognized, to which was given the name of modern secondary education, which is treated in the preparatory report of M. Croiset. That which has been said concerning the name of the two other types explains in part the reasons why these terms have been adopted for the third; furthermore, it is an education excluding the ancient languages, therefore admitting the modern, and, as was correctly written by M. Croiset, “professing, however, to be an education truly secondary, namely, having in view the harmonious and disinterested culture of the mind.” This commentary was adopted on all sides, and this being settled, trouble was not taken to formulate more detailed conclusions. Besides, the discussion on the two first types had previously cleared the ground. In consequence, responding to the questions contained in the report of M. Croiset, we were able to adopt, almost without discussion, the following three principles:

First. This education should at the same time be literary and scientific.

Second. There is no room to make place in it for Latin.

Third. There is room to make instruction in living languages more important and more literary than it actually is.

In insisting on these words, “important” and “literary,” we wanted to show that, without neglecting the practical side, we desired that the study of living languages should elevate the intelligence and the heart of young men and render modern education more attractive.—EGGER, *Reporter*.

LIMITATION AND SANCTION OF SECONDARY STUDIES (BACCALAUREATE AND CERTIFICATES OF MATURITY).

On the limitation and sanction of secondary studies, the labors were singularly facilitated by the two conclusions of the preliminary report of M. Pigeonneau. In consequence, we have just pronounced on the following formula, which was unanimously adopted without any objection being manifest:

It is necessary that secondary studies should have a sanction.

The discussion was next opened on the second conclusion of M. Pigeonneau, thus expressed:

The best mode of sanction is that which permits conscientious pupils of average intelligence to obtain the final diploma without special preparation, by following simply the regular course of studies.

To this, again, there were no objections. The foreign representatives limited themselves to indicating by various details how, in their countries, they gave like character to the sanction. M. Herzen, for example, informed us that in Switzerland at each examination of promotion up to the last the average of notes obtained during the year counted for one-half. The French representatives regretted that this was not also done in their country; they showed that this system of sanction was applied solely in several special schools (polytechnic, central, naval, etc.), where the notes obtained by the pupil during the year entered legally into line of count and for the totality of their numerical value up to the day of final examination. (Communication of M. Chappuis.)

In short, it was shown that the baccalaureate was not a competition, but an examination where is contested the right to success for whoever has honestly labored and where grave interests for the future of the candidate are involved. This being admitted, are all the precautions taken in France? No, and the French baccalaureate, therefore, constitutes a denial of justice. Fewer precautions are here taken to assure justice than in the inferior process before the courts. (Communication of M. Rabier.)

The second conclusion of Mr. Pigeonneau was therefore adopted after these different remarks. Later, the complementary view of M. Pigeonneau was adopted in the following terms: "Whatever be the mode of sanction adopted, it is desirable that count should be kept for obtaining the final diploma of studies, of anterior marks, and of the classing of the pupils in the establishment where he has made his studies." Here again no fundamental objections were interposed, but numerous references were made to the facilities or difficulties of application of the system in countries following their social and political status according to the degree or the freedom of secondary education there permitted and practiced. Each country would determine what value the jury should attach to the information furnished concerning the pupils, and to that degree, in the spirit of its legislation, it could realize the view above expressed.

It was not deemed desirable to go farther in the pathway of practical ideas, and when M. Blanchet presented the terse opinion that the candidates at examinations should be judged by their professors in conjunction with representatives of the state it was not accepted as meriting a vote. This view was declared to be incompatible with the resolutions of an international congress which, while limiting itself to generalities, should pronounce only practical conclusions. "To emit this view," said M. Dreyfus-Brisac, "is almost to manufacture politics, for it touches on questions of interior order and of local morals, in respect to which the passions of people can be, and frequently are, extremely violent."

From the standpoint of an ideal pedagogy, which would set aside political life, this view would be excellent, but if it were adopted to-day it would run the risk of not being understood in the ideal sense, and that is what must be avoided. For example, in France the embarrassment of the legislator would be extremely great.

Account should be taken of the inequality of studies which exists as well in the education of the state as in private education. Certain state colleges would not be allowed the right to conduct the examinations for want of possessing a corps of professors supplied with degrees and enjoying sufficient authority. Moreover, as the colleges are maintained in part by the communes and in part by the principal, who assumes the expense for the profit of the boarding department, the deprivation of the right of examination and the failure of the pupils would engender all sorts of recrimination on the part of municipal councils and families. These recriminations will find echo in the press as well as in parliament, and there would be no doubt that the presence of the delegate of the state in the juries must suffice at least in France (as M. Spruyt appeared to think) to degrade them and make the delegate the scape-goat for all the complaints. (Résumé of ideas expressed by MM. Chappuis and Himly.) In short, if the principle of the judgment of pupils by their masters were permitted we should find ourselves confronted by a double difficulty. On the one hand, the principle would be yielded in requiring pupils of the private schools to pass the examination before a jury of the state in which none of their masters would be found, and, on the other hand, the influence of the state on their studies would be diminished in giving the principle its entire application—that is to say, in conferring upon the masters of the private schools the right to bestow an official certificate upon their pupils. It should be added that in the province of private education there will arise the new difficulty of establishing the distinction between the schools deserving to conduct the examination and those which would present too few guaranties. We should therefore limit, and we have limited, ourselves in effect to the complementary proposition of M. Pigeonneau, which otherwise completely satisfied the partisans of examination passed by the pupil before his professors, inasmuch as the better means of taking account of the past career of a candidate is to have him interrogated by those who have seen him at work. In this manner the opinion, while holding to the ideal principle, does not seem desirous of imposing it. It might satisfy a greater number of persons, which certainly is an advantage not to be despised.

A later proposition, presented by MM. Herzen and Pigeonneau, was adopted: "The Congress expresses the view that the three sanctions permitted for the three types of secondary education should afford access to the different orders of superior studies, each one following the nature of the secondary studies which it crowns."

It was thought that this opinion thus formulated would not trench upon the domain of superior education, and nobody offered objection. Some wished to make it more precise, but that would have entered into details of application with which the Congress could not concern itself. Almost for the same reason, it was not desired to examine the question of serious practical tests, proposed by M. Micé, coming only after the success of written and oral tests, and selected so as not to take up too much time of the judges and candidates. These tests would have been added in all the branches, where the matter permitted to the actual means of appreciating the worth of candidates in the various baccalaureates. This was a question of special character, not very international, and also—a serious objection—of a nature to complicate examinations already sufficiently encumbered as to the subject and the tests.—EGGER, *Reporter*.

THE INAUGURATION OF THE NEW SORBONNE.

The new Sorbonne, whose buildings spread over a vast rectangle comprised within the Street of the Schools, Saint Jacques street, Cujas street, and Sorbonne street, is divided into three parts—the Academy of Paris, the Faculty of Letters, and the Faculty of Sciences. The last is in course of erection, and the walls are already rising from the ground. The second, in which will be included the actual church, will occupy the site of the old Sorbonne, and has not yet been commenced. The

first, which is almost finished, occupies nearly an entire square with a monumental frontage on the Street of the Schools.

The ceremony of inauguration took place in this new amphitheater, which contains 3,000 seats. An immense red carpet covered the floor of the platform, upon which 112 red and gold sofas were arranged. The middle gallery, reserved for Madame Carnot and her guests, was decorated in a special manner. The first row of benches was occupied by the rectors and deans of the five faculties, in grand costumes. Behind them were seated the members of the general council of the faculties of Paris, a delegation of councilors-general and faculties from the provinces, the professors of the faculties of Paris, the professors of eleven lycées of Paris and Versailles, deputations from the Museum, the College of France, the Superior Normal School, the School of High Studies, the School of Oriental Languages, and 50 members of primary education. The rows of seats were reserved for the students. In the galleries were senators, deputies, and municipal councilors. All about the amphitheater were student carriers of banners, tricolors and various other flags representing the universities and the nationalities.

At precisely 3 o'clock M. Carnot arrived accompanied by his ministers and the officers of his military establishment. All the audience rose and saluted him with long and enthusiastic acclamations. At the right of the President of the Republic, taking their place on the platform, were MM. Spuller, minister for foreign affairs; Rouvier, Le Royer, Barbier, president of the Court of Cassation; Poubelle, prefect of the Seine, and Jules Simon. At his left were MM. Fallières, minister of public instruction; Admiral Krantz, minister of the navy; Lord Lytton, ambassador from England; Gen. Menabrea, ambassador from Italy; Chautemps, president of the municipal council, and Jules Ferry. The other sofas were occupied by MM. Jacques, president of the general council; Lozé, prefect of police; Léon Say, Pasteur, Comte, Liard, director of superior education; Rabier, director of secondary education; Buisson, director of primary education; Alphand, Cochery, prefect of Seine-and-oise; Amiable, mayor of the fifth ward; Morel, Boulan, and Foncin, inspectors-general; Viscount Vogüé, Halévy, Claretie, Doucet, Leconte de Lisle, Coppée, Count d'Haussonville, Gaston Boissier, of the French Academy; Frémy, Manuel, Graudidier, Viscount Delaborde, Guillaume, Bailly, Chapu, Hémard, Zeller, Chaplain, Cariot, and others. A warm ovation was given M. Jules Ferry upon his entrance, and a little later to M. Duruy.

After hearing the discourses, which were warmly applauded, all the audience listened to the rendition of the Marseillaise. A great enthusiasm reigned among the students, who, in the midst of cries of "Long live Carnot! Long live France! Long live the Republic!" took up in chorus the national hymn and saluted the march of the professors by copious stamping.

The President of the Republic, followed by M. Gréard and his ministers, then repaired to the council hall, where lunch had been prepared. In leaving the Sorbonne he handed the academic palms to M. Chaumeton, president of the Students' General Association. The excited students immediately formed in procession and defiled, banners flying, before M. Carnot, who responded by salute to their acclamations.

In the evening a brilliant reception brought together, at the house of the minister of public instruction, notabilities of the political and university world, and representatives of the youth of the French and foreign schools. All those who assisted at this beautiful entertainment will retain profound recollection of it. It is well to be able, thanks to the effects of culture, thus to prove that a very ardent patriotic enthusiasm can be allied to the sincerest sentiments of international fraternity.

DISCOURSE OF M. GRÉARD.

MR. PRESIDENT OF THE REPUBLIC AND GENTLEMEN: In the name of the University of Paris, I thank you for having been good enough to give to this solemnity the luster and authority of your presence. It is not alone the first magistrate of the

Republic whom we recognize and proudly salute in this rotunda. It is the inheritor of a name dear to science and education; it is the man who, elevated to the uttermost by public estimation, personifies France in his uprightness and his loyalty.

Four years have elapsed since the placing of the first stone of the Sorbonne, restored and enlarged. We expressed the hope, day by day, that the centenary of 1789 would chronicle its inauguration. Thanks to the remarkable diligence with which the work has been conducted, we are ready. And among the gratifications which we owe to this happy consummation, can I omit this gathering, so distinguished by representatives of foreign universities? Seizing the occasion of the Universal Exposition and its congresses, they had the good will to unite themselves here with the delegations from French universities. Let them be assured that we realize the full value of these pledges of confraternity.

One of the first in date, if not the first, the University of Paris in the Middle Ages was without contradiction the most renowned and the most hospitable of all. The scholars of the times who in the search of origins prided themselves less upon exactitude than imagination, considered it by right of inheritance the sovereign depository of the treasures of science. The university from which all the others descended, wrote Bishop Tilon de Mersebourg, is that of Babylon, founded by Ninus; to Babylon succeeded the city of the Pharaohs, Memphis; to Memphis, Athens, the work of Cecrops; from Athens, Rome, and from Rome, Paris. Bologne is entitled justly to credit for education in jurisprudence; none will contest the supremacy of the University of Paris in sacred and profane literature. Ten colleges were grouped about it as about the common mother—college of "Dennemarche," the English college, the Scotch college, the German, the Lombard, and the Greeks. Kings sent their sons hither to form them in the dialect and good manners. From the thirteenth to the sixteenth centuries it contributed to the elevation of the greater part of mankind, poets, savants, and philosophers, coming from all known sections of the world, of whom posterity has preserved the memory or consecrated the name—William Occam, the "invincible doctor," Raymond Lulli, Thomas Aquinas, Benoit of Anagni, the embryo Boniface the Eighth, Brunetto Latini, one of Dante's masters, Dante himself, Thomas Morus, Erasmus, and many others. Oh, unique city! Oh, Paris without equal! *Parisius sine pari!* wrote Lanfranc, of Milan, in separating himself from his companions of study. They loved "the delectable speech" which resounded in "this gentle land of university blessed by God." They felt everywhere at their ease, because, by the unanimous testimony of those who met them here, love of truth was the sole rule which characterized the discipline of the teaching and which each of his right enjoyed. It is not rash to say it, at a time when all the intellectual life was inclosed within the walls of the schools, the University of Paris was the most active propaganda center of the spirit of France.

On all sides to-day are celebrated the manifestations of the French mind in the fine arts, agriculture, commerce, and industry. Is not here, more particularly, the feast of the French mind itself, that which it has accomplished, with the endowments of the race, the education of centuries; the mingling of sentiment and of reason, of grace and force, at once bold and circumspect, free and ordained, expansive among all, and profoundly human, ardent champion of noble causes, which touch it near or far, sometimes at their cost; imposing only confidence upon others in seeking to pardon its transitory violences by its durable benefits?

In the Middle Ages it was the French spirit which first inspired and almost wholly sustained to the end the impetuosity of the Crusades, gave to religious enthusiasm its full scope and at the same time opened new paths to the activity of the peoples of the Occident. It was the French spirit which at the end of a centenary conflict recovered the sense of country, realized it in a valiant and touching image, and by an effort which politics could but consecrate, set the bases of national unity. If it received from without the breath of the "reform" and of the "renaissance," with what

vigor it appropriated and converted it to the highest aspirations! What awakening of antiquity, rejuvenated and purified by Christianity, was the opening of French literature in the seventeenth century, an expansion so rich and so brilliant that even after the luster of military glory, for so many years undimmed, was extinguished this century, although desolated at its end, preserved for contemporaneous people as well as for posterity the radiant name of Louis the Fourteenth!

On the other hand, what power in the current philosophy which, traversing without losing itself, that hierarchised and pacificated society, brought back to light in the first years of the century of Voltaire and Montesquien, all the controversies of free examination, and with them the ideas thenceforth imperishable, of religious tolerance and social equity, of law and humanity! In fine, has the soul of a people ever found a more generous expression of the work of intellectual and moral emancipation accomplished by itself than the principles of 1789, which became as the charter of civilized nations?

These legacies of the past impose great duties upon the century which achieved them. It has not here failed. Memorable events were accomplished, often illustrious, sometimes painfully disturbed in their course. It has known the exultations of victory and the extremities of defeat. It has seen all the forms of monarchy crumble, and established on their ruins the popular power armed by universal suffrage. Not a single question, political, economic, religious, which may not be raised to-day, of which the discussion does not project its doubts with its lights on the foundation of social organization. But if at no time, perhaps, more pressing, formidable problems have been submitted to public reason, it seems that at no time, either, has the activity of the French mind been more intense or more fruitful. Philosophy searching all the mysteries of its own being and thought; poesy dipping into the sources of nature and the deepest emotions of the soul; history revived by the impartial and sagacious study of documents and texts; public and private law, each day more open to the mind of modern democracy, lending its force to the relief of the humble and the protection of the weak; science, brilliant in wonders, elevating by the power of calculation the knowledge of an invisible world, penetrating by the subtlety of analysis the secrets of life, lavishing its treasures upon industry; all the sentiments, all the passions are searched and laid bare at the theater, in romance, and in literary criticism; by the observation of a trenchant psychology as pitiless as the scalpel—happy if, sometimes, it did not seem to neglect art through excess of fidelity; the language itself put back into the crucible, fortified, stimulated, and fashioned to interpret with energy or delicacy in their most diverse shadings, the ideas which possess us. Here among the embarrassments and the inseparable obscurities of all social evolution, here is the heritage resting upon names destined to live, that our age in its turn is, in its mature years, to transmit to the future.

Young man, this future belongs to you, and it is you who will make it. More favored than your elders, nothing is spared that you may prepare to pay your debt to humanity and at the same time to your country. That in which France was in default before 1789, wrote Guizot in 1815, was a superior instruction which would have permitted the direction of the revolution, if not its prevention. To-day, the chairs are not wanting for teachings nor masters for the chairs, nor power of knowledge and talent for those who fill them. Do not forget, my friends, that these precious resources were created and multiplied for you. Work to become capable, and show yourselves worthy to receive the benefits. Whether pressed by the necessities of life you have time to acquire only a professional education, or whether the ambition seizes you to become teachers yourselves, maintain and propagate the traditions of the French mind. Carry high the object of your thoughts; love science, for it is a wise counselor. This is a school of sincerity and respect. Like religion, it has its apostles and its martyrs. It inspires self-sacrifice, it prepares for all duties; and between those which it brings together this day, in the sentiment of a

noble emulation for progress of the arts of peace (and I shall not be contradicted by those students, your comrades, from all countries who have responded to your appeal), it establishes the bonds of a common country.

After this much applauded address, M. Hermitte, professor at the Faculty of Sciences, delivered a very learned discourse, which was well received by the specialists who heard it. The subject treated by this eminent professor was "The labors of the professors in mathematical education at the Sorbonne."

Subsequently, M. Chaumets, president of the municipal council, in the name of the city, made delivery of the monument to the state. He explained that the new Sorbonne is constructed at the joint cost of the city of Paris and of the state.

DISCOURSE OF M. CHAUMETS.

MR. PRESIDENT OF THE REPUBLIC AND GENTLEMEN: I cannot repress my genuine emotion in speaking at this ceremony, in the midst of the most eminent men of ideas in the world, and in this new and magnificent temple which the Republic has just erected to science, on the same spot where all the intellectual past of our country is in some measure synthesized.

The impression we experience here is that of profound respect, and it would be a great wrong were the democracy accused of having banished from itself this elevated sentiment. Disdainful of the pretensions of fortune and of birth, it bows before science and is the first to recognize the beneficent sovereignty of savants and thinkers, who are least disposed to suffer another domination.

And a republican, should he not be moved by the spectacle which is now presented to our eyes, and which evokes the memory of all those illustrious men, savants, philosophers, historians, and poets, whose struggles for the liberation of thought have slowly brought humanity to the consciousness of its rights, and whom it is just to salute this day as the remote precursors of the Revolution, the centenary of which we celebrate.

But it is not for me to speak here in the name of the University of France, to retrace its glorious history, and to give utterance to the hopes already justified by these great things accomplished, which it desires to found on the Republic.

The rôle of president of the municipal council is more modest. To affirm before you the interest taken in the cause of superior education by the representatives of the Parisian people would be a superfluous task. The sacrifices made for the reconstruction of the Sorbonne are, in this respect, the most eloquent of discourses. They say sufficiently that to our eyes the power and the prosperity of the country are intimately bound to the lot it bestows upon its savants, its writers, and its artists, and that the funds consecrated to the development of high ideas should not result solely in industrial progress, but also in the elevation of the moral and intellectual standard of the whole nation, which increases a hundred fold the worth of the individual, and assures to the people advantage over their rivals.

Nevertheless, gentlemen, I may be permitted to recall that the municipal council did not vote without debate the eleven millions which were asked of it, and that it was anxious to guarantee from this occasion the progress of private education. The Government has entered liberally into our views, and all those who by the merit and the character of their work are warranted in claiming such an honor may in the future teach by the side of distinguished masters of the faculties of state. A new era is about to be opened for the Sorbonne, not less brilliant, we have the firm hope, than those which preceded it.

But can it be said, gentlemen, that the desires of the municipal council should be now satisfied? That would be to ignore the extent of its ambition. Determined adversaries of centralization and uniformity, when not imposed by superior necessities, we nevertheless bear in mind the noble and fruitful rivalry which in certain countries formerly animated neighboring universities, and we have the temerity to

think that, in according to the city of Paris the right to organize courses of superior education, the public powers will perform a work useful to science and the Republic.

To-day already, and in the very narrow limits which the law determines for our action, we are endeavoring to complete university education, and it is to this end we have established at the Sorbonne two courses of very high interest—the course of history of the French Revolution, and that of biological philosophy.

The most ardent of our desires is to be shortly placed so as to take advantage of and utilize, to the profit of high studies, the totality of our good will.

But it would be bad grace, gentlemen, to longer discourse of ourselves in a reunion where the larger part of foreign universities are represented by their most celebrated masters and by their students. As is science itself, the solemnity of to-day is international, and this communion of men to whom, in all countries, the education of new generations is confided, can but powerfully contribute to the fraternity of peoples and the peace of the world.

I close, gentlemen, by expressing to the delegates from foreign universities the wishes of welcome to the city of Paris. Gentlemen, I salute your glorious banners! (Long applause.)

M. Fallières, minister of public instruction, then arose and delivered the following discourse, which was interrupted continuously by the cries and applause of masters and students:

DISCOURSE OF M. FALLIÈRES.

MR. PRESIDENT OF THE REPUBLIC AND GENTLEMEN: I shall not dissemble the joy and the pride I feel in speaking before such an assembly and on such an occasion. This inauguration of the new Sorbonne, celebrated in the centenary year of the French Revolution, at the side of the Universal Exposition, reuniting from all points in France around the respected chief of the state, the teachers of higher education who create science and the students who receive it in trust, in one intention and purpose, well conceived to gladden French hearts and inspire with a legitimate pride all those who have contributed to the work of the renewal of our superior education.

Of all the works of the Republic there are none more assured of the judgment of history, for there are none which have responded to wants more real, which have been conducted with more method and perseverance and which are inspired by higher solicitude for the interests of the country.

That which was wanting (only twenty years ago) in our superior education, which amid resplendent glories concealed unknown miseries, the oldest among you have not forgotten. I shall not recall it here. These miseries, which a former minister pointed out to the indifference of the public powers in the first statistics of superior education, are now only a remembrance. What good is it to revive it? That which we have done suffices for our honor; what need of enhancing it by talking of that which others have not done?

But that which I should not suppress, is the sureness of instinct with which the French democracy, hardly free and master of itself, has recognized in science the great ancestor always fruitful; the active respect with which it has surrounded science; the faith reposed in it; the liberality with which the nation has treated it.

Intent, as it should be upon the instruction of the people, the Republic felt that if primary education is a system of canals which distribute, it is not the source which produces. It has had the intuition that science is like the waters, the higher it is carried the more force has it to expand and to penetrate deeply. It has entertained the sentiment that, if it sufficed for monarchies that the national ideal should be the gift to a few minds of the *élite*, in a democracy with sovereignty spread over all, that ideal should be bestowed upon all, and for this work nothing is more valuable than history, philosophy, literature, and the sciences.

In order to show that which it has done under the impulse of these sentiments, it

becomes necessary, gentlemen, to take up before you, one by one, the budgets of public instruction, each year increasing, follow day by day the collective work of all the ministers whose names you know, and who have been, without interruption and without faltering, the servitors of the same design.

It is necessary to describe our faculties to you, everywhere reconstructed and enlarged, to introduce you to our laboratories, show you the implements thoroughly renewed, to glance over our enriched collections and libraries, and take account of the new courses of instruction we have created.

The day will not suffice.

Besides, is not the new Sorbonne the most eloquent of all witnesses? Delayed and promised for half a century, behold that which, under the skill of a master architect, erects its front and roof in the heart of the Latin Quarter, after a purely French design, like a metropolis in the midst of our other schools. Behold that which encompasses from two points, the old Sorbonne of Richelieu, on one side the palace, on the other the workshop. Behold, all about the little patch of ground where in other times stood "the very poor house" of Robert de Sorbon, that which displays its magnificent multiple edifices, adorned by the genius of our artists!

That which you behold, you owe, gentlemen, to the city of Paris and to the state.

Permit me, in your name, to thank the city of Paris, which, prodigal for the primary schools, has not been less generous to our schools of higher education.

Permit me also to hear thank, in the presence and in the name of our reunited faculties, the cities of the departments, large and small, Bordeaux, Lyons, Toulouse, Montpellier, Lille, Nancy, Caen, Grenoble, Clermont, Rennes, and Dijon, valiant cities which have comprehended their duties toward science, and which have all paid their debt with as much liberality as Paris.

You, gentlemen, have understood that so much confidence and sacrifice imposes new duties, and for fifteen years you have entertained consciousness, each day clearer and more active, of your double scientific and social function.

It is a hundred years since the universities of the olden time expired. Long since abandoned, as they were, by that living spirit which had formerly made the University of Paris the great light of the Middle Age, they died because they failed to recognize the new principle of life in the new mind which, since Descartes' time, has conquered all and possessed all; the sciences of nature after that of mathematics, the sciences of man after those of nature.

The revolution had dreamed of establishing in their place vast encyclopedic schools, where all the forces would meet, animated mutually by a harmony comparable to that of the laws of nature and of the faculties of the human mind. This admirable programme did not succeed. After three-quarters of a century, you have revived it, gentlemen. We resume it with you.

By one of those fatalities which history frequently records, the work of the revolution in the matter of higher education was opposed by its own designs. It had wished encyclopedic schools, and it left special schools; it had desired to distribute over the territory a certain number of scientific centers, and it left only that of Paris.

And when the consulate and the Empire completed the rough-hewn organization of the superior education, that which was done was again the creation of special schools under different names, each one devoted to the culture of one particular science or to the preparation of a settled profession, without doubt bound together by the network of the administration, but without internal unity, without common soul.

Nevertheless, our superior education thus constituted has not often failed to throw great gleams of light over the world. We have had this lineage of illustrious mathematicians, one of the most celebrated of whom a little while ago, with incomparable authority described their immortal works.

To speak only of the dead and of the greatest among the dead, we have had in philosophy, history, languages, literature, and erudition, Cousin, Guizot, Michelet,

Silvestre de Sacy, Abel Rémusat, Villemain, Bournouf, Ozanam, Victor Leclerc; in physics, Gay-Lussac, Dulong, and Ampère; in chemistry, Dumas, Gerhardt, Sainte-Claire Deville, and Wurtz; in the sciences, Cuvier, Milne-Edwards, Magendie and Claude Bernard.

But around the geniuses, beneath these great talents, what lack of cohesion, of dash, and of action! Thanks to you, gentlemen, it is no longer thus. With the sagacity and the decision of strong men, you have yourselves taken the initiative of your reform and your transformation. You have here been aided by an administration solicitous of its duties toward the country, and which has applied itself to create agencies proportionate to the necessities as they appeared to you and their progress was manifested. From this evolution the phases of which succeed and enchain themselves with security, great effects are already visible to the eyes of all.

It is at first a commencement of scientific decentralization. But lately, too, there was an excessive contrast between Paris and the province. About all that enlightened and vivified was concentrated at Paris. Without doubt Paris rests and will remain an incomparable source of science, a unique treasury of knowledge, a center of aspiration as well as a focus of expansion and radiation.

But all around, in the obscure zone that envelops it, we have seen for sometime the glitter here and there of luminous points, the intensity of which increases. We see universities born and united, each one with its proper characteristics, with the mark of its sphere, the savor of its soil, the promise of a well-marked individuality.

At the same time a concentration has been effected in the faculties each day more binding in its forces. Your companies, gentlemen, have borne the old name of faculties for a long period; but these faculties were lacking in the varied powers of a single soul. To-day, affairs are returned to their natural order. You have become bodies, and while resting attached to the state, from which you would not wish to be separated any more than the state would consent to be separated from you, you have acquired the functions of bodies.

You are no longer simply juxtaposed one with the other; you have become parts of the same corps, in the life of which you all unite, each after its kind, and if this body has not yet received the name which suits it—that name which I read inscribed on these walls as an appeal and a pledge—be sure that it will not be refused, with all that it implies, to the best doer and the most deserving.

One of the most salient traits of this metamorphose, one of those which I should here notice, because I see with you one of the most precious signs of the times, one of the most solid reasons for our faith in the future, is the collective conscience which has possessed our youth themselves in contact with and under the influence of their masters.

Before us are our youth. They are grouped here not by accident and for a single day, but in durable shape. They are here, those whom we love, those whom we wish should be joyous, intrepid, and deliberate, impassioned for truth, for liberty, for justice, and for country.

You, gentlemen, are the select of the nation. In your time you will soon have charge of the country. We confide to you, as a guard of honor, the trust of the genius of France. Each day you will receive it, piece by piece, from the lessons of your masters.

Your first duty should be not to desert it, nor diminish, nor alter; you should also develop and enlarge. You are the sons of a country where a long history has sown deep-rooted seeds of division.

You are coming to the age of manhood and to public life at the moment when powerful nations are formed around us, animated by redoubtable emulation.

Well may you say, then, that this soul of France, placed in your soul, will strive to end quarrels and divisions, and that you will supply the means to have done with them. Take count of that which contains the moral sentiments and ideas, honor, justice, liberty, tolerance, and respect of human person, and tell me if there be not

there, above the egotism of parties, a superior region of thought and action, where all minds and all intentions can unite in a common love for truth and country.

Again, well may you say, that this soul of France, your safeguard from within, is also one of your forces from without. It teaches you that from the womb of nations is delivered a harmony of sentiments and ideas which establish above them the sense of humanity. This consciousness is not the exclusive work of any one nation, but all have the right to claim a part. The portion which comes to your country is neither small nor perishable. In the air that all civilized men breathe, there is something contained of France. Not in vain has she given the world this double revelation—the Discourse of method and the Declaration of human rights.

This radiance beyond our borders has made ours ascendant for a long period. For this we ought to be again to-day something more than a weight or a counterpoise in the unstable equilibrium of peoples.

You owe to this a renewal of grandeur and of distinction.

There is, do not forget it, a force all the more powerful because it acts by attraction. This force will serve to make you love your country; strive to gain hearts for France, and let the first gained be those of these young men, your comrades, invited by you from various parts of the world, and whom we cordially salute.

Young Frenchmen, in the day when you shall have the destinies of France within your hands, may France be, through you, as its genius demands, free, amiable, generous, and human.

And may our guests not see in these words an egotistic wish. Love France, and in her and above her, love humanity.

DISCOURSE OF M. ERNEST LAVISSE AT THE STUDENTS' BANQUET OF MEUDON, AUGUST 12, 1889.

GENTLEMEN STUDENTS: Rabelais, of whom you are to-day the parishioners, has foretold our celebration in very clear terms, "The noble Kingdom of France will prosper and triumph this year in all pleasures and delights to such extent that the foreign nations will flock to it. Small banquets, small sports, a thousand joyousnesses will here be had where each one will take his pleasure." So spoke the curate of Meudon, in chapter six of *Pantagruélien Prognostication*. With that irony which the prophets often employed he said, with admirable euphemism, "small banquets," for, on the day of the inauguration of the Sorbonne, you drank 1,300 bottles of champagne (counting only in this estimate the official bottles). Your sports have not been smaller than your banquets, and I congratulate you, gentlemen, in the name of the honorary members of the general association, old students, who are not those who study the least, grave persons, who love the young and, their youth having passed, know that your youth must pass in time.

The "delights" have not been stinted for you. The city and the state have given you this evening's entertainment, and you have enjoyed the entertainment of the minister of public instruction, of the minister of public works, the opera, and the feast at the city hotel. Spontaneously the administrator and the associates of the French comedy thought that the hospitality of France would be incomplete if the authorized interpreters of our great dramatic writers did not accord you the honors of the genius of Corneille and of Molière. M. Claretie bade you welcome in poetic verses replete with high sentiments of patriotism and of humanity. The house of Molière furnished you with a princely entertainment. Finally, for the first time, you have left Paris to come hither. My friend, the mayor of Meudon, desired to receive you like kings; he has harangued you with the accompaniment of his flourish of trumpets, and provoked somewhat the jealousy of His Majesty the Shah of Persia. I am not astonished that he has left.

Students of France (I shall address myself first of all to you), you have merited the honor of offering these delightful rejoicings to your hosts. You are aware that

I am not ordinarily a complimenter, but to-day I yield to a duty of conscience, a very pleasing duty, in declaring that you are indebted to yourselves for these students' feasts, which are new to France. So far as was possible it became necessary to effect a thorough revolution in the customs of our schools. You have yourselves accomplished this revolution. You alone. After the first example of a students' association was furnished by the cities of Nancy and Lille, Paris established hers, and after Paris came all the university cities.

Your work has been well conducted, lively, and bright, after the French fashion. As soon as possible you opened relations with foreign students' societies. You have exercised your diplomacy, and in this you have been skillful and felicitous. In all circumstances you have done that which you should do. I have not forgotten, nor shall I ever forget, the feasts of hospitable Bologne. I again feel the charm and grace, but, above all, I admired two things: the enthusiastic salute of Italian comrades to our flag and your serious and proud fashion of bearing that flag.

The journey to Bologne was like a public feast, because the public came to understand that the students were capable of doing national work. The press, which had been so friendly toward your coming, meantime taxed its ingenuity to make you popular. But you brought back a great project from Italy. Wherever you were received you gave to your hosts the Paris rendezvous of 1889. You had no precise idea of the ways and means of organizing feasts. You only felt that it would not be difficult to find your place and hour in the great tumult of the Exposition. You knew that considerable money would be needed, and that you had not much. No matter; you were in the advance, and everybody followed you.

Gentlemen students of France, will you survey the path you have traveled?

Four years ago the first stone of the Sorbonne was laid with grand ceremony. No student was invited. The Sorbonne has now been inaugurated. The president of the Republic presided, surrounded by ministers, ambassadors, and members of the Institute. The University was represented by its counsellors, its rectors, and the professors of its universities, colleges, and schools. Who were the heroes of this celebration? Next to the president of the Republic they were the students. We had thrown the ermine about our shoulders, we had put on our robes which sang all the gamut of the heavenly arch; we were made up very fine, but, poor seniors that we are, the glances were for the velvet caps, for the bonnets fringed with silver, for the hats of red satin, the casques with black tassels, the caps with the white crests, the sashes of every color, the antique banner, and for these thousands of young faces, upon which were stamped the characteristics of great human races.

What does the accomplished progress signify? That you have finally given the French youth their place in the sunshine. They had been an anonymous mob, scattered among the faculties and schools, which did not know itself. You have made a professional corps, noble among all, a body in the nation. By you we know who are the juniors. Formerly it was believed that the juniors were a few original individuals, or pretending originality, affected persons, diletanti, perpetrators of feats of skill in literature, or, worse than that, persons of the fatigued genus, who manifested disgust of life in the same way that long, romantic hair and waistcoats, after the fashion of Robespierre, were formerly worn. You are the juniors, you, whom we have seen thrilled by suggestive words and filled with sincere emotions, and whom we have heard express, through acclamations addressed to the chief of the State, the adorations entertained for honor, liberty, and country. You are the juniors, my friends, you, who sing and laugh and toil with joy. You possess activity, valor, good sense, gaiety, mischief, and enthusiasm, the soul, all the soul of France. I am one of those to whose eyes you have brought tears more than once on this occasion, and I thank you. We who have suffered so much will recover confidence in the perpetuity of the renewal of national forces. After our winter we see our spring coming.

Young foreigners, in the name of the elder students of France, I salute and thank you for having responded to the appeal of your French comrades. You have aided us to revive the days when the University of Paris, the alma mater of all nations, almost sufficed to enlighten the world. The men of that period loved to give concrete forms to ideas. They attributed to them domiciles. They said that the popedom resided at Rome, the empire in Germany, and science at Paris. Since that time, since our University has received the official consecration of its existence, seven centuries have not wholly wasted themselves. There is not much in the interval; it is a brief moment in the increase of the human race, and yet who shall recognize man and the world from the distance of seven centuries?

At that time they had hardly outlined the frontiers among the peoples. No nation had conscience enough of itself to feel better than its neighbor. Men spoke different languages, but they understood each other in the language which the dominion of Rome, perpetuated by the power of the church, had made universal. Many were the minds of the peoples, but the culture they received was identically the same. As the future nations blended in Christianity, the future national geniuses promenaded fraternally in the alleys of the *trivium* or the *quadrivium* under the severe maternal eye of theology.

To-day the sciences (and how many sciences) are emancipated; the *quadrivium* has become the *millivium*; thousands of intellects here teem in full liberty. Science is again at Paris, but it is everywhere. Everywhere in Europe, in countries unknown, practically, to the thirteenth century; in the New World the universities now work and think. Each speaks the language of a country. Seven centuries ago I would have addressed you this discourse in Latin and you would have understood me. You would have exchanged your gay talk among yourselves in the Latin tongue. To-day, this night, and around this table, you speak all the languages. I speak mine, for fear, that Pantagruel, who should be prowling about these environs, may suddenly appear and treat me like the "Limosin" who "despumated the *Latin verbiocities*." Thus, gentlemen, all is separated, diversified, and multiplied. Life is everywhere extended and everywhere active. An hour of our times accomplishes more work than a century of the times past. Be happy, then, that you live to-day, for to-day is great. Let me add, do not depend upon the work of your fathers; no generation has the right to be inert; each to its task, and yours is important. To you to-morrow should be better than to-day.

For there are great shadows over our great lights. All of our activity is not well employed; too large a part is given to hate and destruction. Gentlemen foreign students, I wish to talk to you as men. I have heard many generous illusions expressed these days. Day before yesterday, in a beautiful familiar ceremony, delegates from all nations celebrated peace and fraternity. Yesterday, at the time when the endeavor was made to select by lot the orator who should speak solely in the name of the foreigners, you were asked if there were nations still. "There are no longer any nations," some one replied, "there are only universities."

And since you had taken the resolution to "thee" and "thou," it was a pleasure to hear cried from one end of the table to the other, "To thee, Cambridge! To thee, Bologne! To thee, Harvard! To thee, Vienna! To thee, Liège! To thee, Budapesth! To thee, Venezuela! To thee, Lund! To thee, Bâle! To thee, Helsingfors! To thee, Prague!" But in listening to you I was apprehensive of the crash against the hard reality which your dream would receive. I could not rid myself of the sad thought that many of you perhaps will meet elsewhere than at feasts.

Young men, do not look too much on the bright side of the world, so that you may not lose your courage on the day when you will see it as it really is. Cosmopolitism is not the true remedy for the disease we suffer. Again, I do not preach to you the doctrine "I do not believe it; I do not like it; it is not of our period!"

In days long past there was a Christian cosmopolitism, but in those times, ideas

and beliefs universally admitted, constituted the common ground of the intelligence and heart of men. To-day that is questioned and violently contested.

At the close of the last century philosophic cosmopolitanism succeeded Christian cosmopolitanism. All those who thought found themselves cramped within the confines. It seemed that the eighteenth century prepared the era of nations fully conscious of themselves, attached to their past, of which all the relics were venerated, proud of their antiquity or boastful of their infancy, resolved to exist, and claiming for their use all virtues and all energies.

Gentlemen, our century has made nations. It has created or resuscitated Greece, Belgium, Italy, Hungary, Germany, Roumania, Servia, Bulgaria, and the American Republics. Behold its principal office, its distinctive mark, its originality, and its glory! Cosmopolitanism as it was understood in other times, should it seek to again assert itself, would be instantly overthrown by a breath from all the breasts of peoples.

Gentlemen foreign students, love then your country as we love ours. In the great uncertainty when, on all vital questions, we leave science and philosophy, human activity, if it have not an immediate, visible, and tangible object, will risk decay. I well know that if I kept to myself certain sentiments and certain ideas the love of native soil, the long line of ancestors, the joy of finding my soul in their thoughts and actions, in their history, and in their legend; if I did not feel myself part of the whole, the origin of which is lost in the fog, and the future is indefinite; if I did not thrill at the singing of a national hymn, if I did not entertain for the flag the adoration of a pagan for an idol, who offers incense and at certain days hecatombs; if I should become forgetful of national sorrows, truly I should no longer know what I am, nor that which I do in this world. I should lose the principal motive for living.

What is then the great problem of the time in which you live? It is the reconciliation of the immediate and clear rights of countries with the more vague but superior rights of humanity.

To effect this reconciliation do not count too much on science. Mathematics, physics, and chemistry are the aides-de-camp of the ministers of war. Do not expect this even of philosophy. It teaches that the feeble have no right to live. The doctrine of which you are the apostles may be explained in two words: Every country owes respect to all countries. In all places where men consent to live together under the same laws, with like sentiments and like passions, this collective existence is legitimate; it is august; it is sacred; it is inviolable. Young men, to-morrow you will write the opinion of the world. To the world which hesitates between the old idea and the new, where the phenomena of barbaric antiquity are confounded in a strange experience with the marvelous progress of civilization, give this dogma: The greatest of crimes against humanity is to kill or mutilate a nation. Be horrified at this crime. Suffer the pains of the victims!

Nevertheless, do not misapprehend the meaning of my words. I know the duties of hosts toward their guests. I do not seek to interest you in our quarrel, nor to solicit your aid. We desire to be equal to our task, and, please God, we will be equal to it. The expression of an egotistical sentiment before these young representatives of all peoples would be an error and an incivility.

Let me say, however, that France of the nineteenth century has special reasons for preaching the doctrine of respect of nations toward nations. Republicans of North America, our fathers fought side by side in the war for independence. They proclaimed together the right of the new period. Hellenists, we were at Navarin, with England and Russia, and our flag saluted the liberty of Athens. Belgians, we left our blood in the trenches of Anvers. Italians, in the lapse of centuries past, your country has been the theatre of our wars of ambition. We placed the noblest passions of our soul in the war that we fought together. I can say, then, to all,

we have shared the compassion which we solicit for all sufferings. For how many exiles has our country been (I will not say the refuge but) the home.

Gentlemen foreign students, this is why, at the close of our festivities, of which you have been the joy and ornament at the moment when we separate from you, full of respect for your lands, moved by the spectacle which your youth has exhibited during this week of fraternity, and realizing that to-morrow you will be among the humanities, I do not find in my heart a wish more humane than that which I now express, the hand extended toward your banners, "May the spirit of France be with you."

CHAPTER IV.

EDUCATIONAL SYSTEM OF SCOTLAND.¹

TOPICAL OUTLINE.

Political description of the country—Summary of educational statistics—Historical antecedents of the present system of education—Spirit of the education act of 1872—Structure and operations of the present system: (1) Central administration. (2) School boards: their origin, powers, and present number. (3) Schools: scope of; classes of; present supply. (4) School attendance: compulsory provision; statistics of enrollment; conditions affecting average attendance; method of computing; statistics of; irregularity of attendance and early withdrawal; effects of remission of fees upon attendance. (5) Finances: sources and amount of income; expenditures, amount and per capita. (6) Subjects and standards of instruction; provisions for maintaining high standards; subjects recognized for grant examinations; operations of the schools as shown by examinations in 1889-'90; tendency of the mode of distributing the Parliamentary grant to depress standards; the mode in detail. (7) Teachers: examination by Government; appointment, salaries, and tenure regulated by local boards; professional training; status of the force in 1889-'90. (8) The training colleges: origin, regulations, course of training, relations to the universities, statistics for 1889-'90. (9) Organization and management of schools: local independence; diversity of local conditions as shown by reports of rural districts and cities. (10) Recent expansion of the system: measures for promoting freer classification; increased scope of night schools; relief from school fees; provision for the blind and the deaf mute; special help for Highland parishes. (11) Movements affecting higher class schools: Government inspection; leaving certificates; provision for technical education. (12) Auxiliary aids to education: educational associations; bequests. (13) The universities of Scotland: popular characteristics; limitations; recent measures of reform; Scotch universities' act; universities' commission; power of senates restricted; university courts enlarged and authority increased; representation of students in the courts; organization of universities; relation to popular movements; material improvement; funds; proposals of the universities' commission; liberal concessions to the claims of women; London Times on the work of the commission.

Scotland, constitutional monarchy: area, 29,820 square miles; population (census of 1891), 4,033,103.

For purposes of local government the country is divided into 33 counties, whose administration under the local government act of 1889 is entrusted to county councils. Parishes, which are smaller areas within the counties and burghs, are districts of educational administration.

¹Prepared by A. Tolman Smith, specialist in British and French school systems.

Summary of educational statistics.

Sources of information.	Institutions.	Date of report.	Registered students and pupils.	Teaching force.	Expenditure.
Statesman's Year Book, 1891.	<i>Universities.</i>				
	Aberdeen.....	1889	909	35	.....
	Edinburgh.....	1890	3,576	103	.....
	Glasgow.....	1889	2,165	61	.....
	St. Andrews University College.....	1890	208	16	.....
Report of the committee of council on education, 1890-'91.	Dundee.....	1890	307	19	.....
	<i>Elementary.</i>				
	Day schools.....	1889-'90	673,566	12,948 }	\$5,635,285.00
	Night schools.....	1889-'90	13,667 }	
	Training colleges for elementary teachers.	1889-'90	852	73	
					185,417.50

HISTORICAL ANTECEDENTS OF THE PRESENT SYSTEM.

The existing system of education in Scotland is an outcome of causes deeply involved in the political and religious history of the country. The principles which give life and character to the system brought about the Reformation, and to the issue of that struggle is due the final establishment of those principles.

While the Reformation changed the conditions under which the means of education had been previously supplied, it did not destroy all the established schools, as was done, for instance, by the French Revolution, and consequently, looking at particular institutions, it may be said that education in Scotland has a history of continuous development extending over nearly seven centuries. The present system may therefore be best understood in the light of its historical antecedents. This history is the more significant to us because characterized by the successive adoption and gradual welding together of the principles which are now recognized in all English-speaking countries as essential to an efficient system of popular education. It derives importance also from the fact that it offers a complete view of the process of substituting a civil for an ecclesiastical system, a process which seems destined to become universal. These considerations give interest to the historical survey appended to the outline of the existing system. It must suffice here to say that this system was preceded by a complicated variety of educational agencies, of which the chief were parish schools, founded upon a statute of 1646, which was revived and made operative in 1696. Parish and burgh schools, supported by local funds and by tuition fees, made up the public provision for education. In addition there were schools partly maintained by parliamentary grants, mission and sessional schools maintained by the Established Church and the Free Church, and other parochial and private schools. Parish and burgh schools carried instruction to the level of the universities, which were easily accessible to all classes. The date of the passage of the "Scotch Education Act" (1872) was

opportune for the organization of these various agencies into a system maintained by the combined action of the Government and local authorities.

In framing the Scotch act care was taken, as in framing the English act two years before, to guard the rights of the Government with respect to funds appropriated from the public treasury. At the same time equal care was shown for the preservation of the Scotch ideal. This was a broad and comprehensive ideal, embracing the different grades of scholastic work; it was scientific, recognizing the professional character of the teaching vocation; and, on the social side, it was a liberal conception, purposing for all classes the chances, at least, of complete education; moreover, in the two and a quarter centuries during which the conception had been taking shape, abundant precedent had been established to guide in the final effort for its realization.

This ideal differentiates the Scotch act from the English act passed two years before. The latter related to elementary schools exclusively; the former has a wider scope, providing the foundations of a system of graded schools correlated to the universities which lie beyond its province. With respect to the interests of the Government, the two acts are substantially the same.

STRUCTURE AND OPERATIONS OF THE SYSTEM.

The structure of the Scotch system of education was determined in all essential particulars by the original law (*i. e.*, Education Act, Scotland, 1872). Subsequent laws have modified the system, chiefly in the way of extending its scope. The general operations of the system are directed, as are those of the English system, by the codes (*i. e.*, body of rules and regulations for the application of the laws), issued annually by the education department (committee of council on education, Scotland). These rules have reference to the conditions upon which the Government grant may be claimed by school authorities; beyond these large liberty is left to local authorities.

1. CENTRAL ADMINISTRATION.

For the general direction of the system a Scotch educational department was created, composed, like the English department, of lords of the privy council, and having the same president. Each department has its own vice-president, who represents its interests in the House of Commons, and since 1885 each has had its own secretary.¹ The duties of the department are the same as those of the English department, *i. e.*, determining the conditions according to which parliamentary grants shall be distributed to the schools, maintaining a system of inspection over the schools, and administering the grant.

¹Mr. Henry Craik has filled this position in Scotland since the division.

The department submits to the House of Commons annually an estimate of the amount of grant which will be required for the ensuing year, accompanied by a report of the operations of the system for the current year.

The basis adopted for the distribution of the Government grant is the same in Scotland as in England, *i. e.*, the results of inspection as to general conditions of efficiency and of examination in prescribed studies. According to present arrangements, the country is divided into three districts, assigned each to a chief inspector. Under these are 27 subordinate inspectors and assistants who examine and report upon individual schools.¹

2. ORIGIN AND PROVINCE OF LOCAL SCHOOL BOARDS.

The Scotch act, 1872, provided for a uniform system of schools to be controlled by elected boards. For the purposes of this act, every parish and every burgh was constituted a school district, and the election of boards was made mandatory for each and all, whereas, in England, the election of boards was left to the option of ratepayers, or to the express order of the education department. Ecclesiastical superintendence of public schools in Scotland, which, under the parish system (1696), had been simply transferred from Catholic bishops to Presbyteries, was abolished by the act of 1872 and all relations between the schools and the church terminated. The matter of religious instruction was left to the boards, excepting that if given at all it must be at the opening or close of a school session, with provision for the free withdrawal of all children whose parents so desired, a privilege which had been accorded under the old ecclesiastical rule. Unlike the English act, the Scotch act did not prohibit the teaching of a religious catechism, or religious formulary distinctive of a particular denomination in the hours assigned to religious exercises.

Power was given to the boards to claim and levy local taxes (rates) for the support of schools and to borrow money upon the rates to defray costs of building and furnishing schoolhouses. The act called for the maintenance of a school fund in every parish or burgh under the charge of a treasurer, appointed by the board, this fund to consist of the parliamentary grant, moneys raised by local taxation, from fines for violation of compulsory clause, private bequests, and school fees.

Present number of the boards.—979 boards, viz, 921 parish and 58 burgh, were in operation in 1889-90, representing a population of 3,735,573, or 92 per cent of the estimated total population. The population under individual boards ranges from 148, the smallest, to 511,415 (Glasgow). The majority of the boards are of the minimum size allowed under the act, viz, 5 members. Several have the maximum of 15 members:

¹ The statements as to the present operations of the system contained in this article are from the official report of 1890-91 (covering the year ending September 30, 1890). The structural features of the system have been drawn from the laws and from the rules and regulations of the department. Free use has also been made of a "Manual of the Education Act for Scotland," by Mr. A. C. Sellar.

3. SCHOOLS.

Scope of.—The act of 1872 outlined the framework of a graded system of schools, including infant schools for children under 7 years of age, elementary day schools for children 7 to 13, evening schools, and secondary schools.

Public schools.—All parish and burgh schools were transferred to the control of the school boards and were henceforth known as public schools. School boards might also establish industrial schools for vagrant or vicious children, to be managed under the provisions of the industrial schools act of 1866.

Private schools.—Managers of existing denominational schools or nonpublic schools were admitted by the act to share in the parliamentary grant, provided the department was satisfied that such schools were "efficiently contributing" to the secular education of the parishes or burghs in which they are located; but this provision could not be extended to new schools of this class unless proof was given of their absolute necessity. These clauses are significant of the different attitude of the Scotch and the English minds with respect to denominational schools. In the former country the general preference was for a uniform system comprising the entire school provision; in the latter denominational schools were and still continue to be guarded with intense and jealous solicitude. The different spirit of the two people in this respect is illustrated by the fact that, whereas the attendance upon private elementary schools (chiefly denominational) in England fell from 92 per cent of the total attendance in 1874 to 84½ per cent in 1890, the corresponding decline in Scotland was from 53 to 15.48 per cent.

School supply, 1890, and growth since 1872.—In pursuance of the authority granted them to provide adequate school accommodation, the boards have virtually met the existing demand. In 1890 there was provision in State-aided schools for 723,840 children, or 17.61 per cent of the population, as against 281,688, or 8.3 per cent in 1872. Of the increase of 442,152 school places here indicated, 27 per cent, it is estimated, have been required by the growth of population in the eighteen years since the passage of the act. Making a small allowance for excess of places in a few districts, there remain about 70 per cent of seats as the deficiency in inspected schools at the time of the passage of the act. This accommodation has been provided at an expenditure of £5,207,712 (\$26,038,560), of which 88 per cent is the contribution of school boards raised upon the security of local taxes. The balance, comparatively small, has been derived from public grants. The school provision seems to be well distributed. The actual supply is about 38,000 places above the estimated demand, but this is no more than sufficient for special requirements in the way of class rooms, drawing-rooms, etc.

Classification of inspected schools.—The number of elementary schools (*i. e.*, institutions under separate management) actually inspected in Scotland in 1889-'90 was 3,116, including 3,426 departments in which separate head teachers were employed. Of these only 313 were for infants, this grade of departments having much less development in Scotland than in England; 53 were for boys only, 49 for girls, and 3,011, following the time-honored custom of Scotland, admitted both sexes. Three industrial schools had also been established, all by the Glasgow board. In the same year 54 higher class or secondary schools, 9 being private, were brought under government inspection, as against 11 schools of this class recognized by the department at the date of the passage of the act.

4. SCHOOL ATTENDANCE.

Compulsory law.—The act ordered every parent to secure the instruction of his children between the ages of 5 and 13, or until a certificate of exemption should be secured. Parents failing in this obligation are subject to prosecution and penalty by fine or imprisonment. The compulsory provision extends to blind children. Parochial or burghal authorities were authorized to pay the tuition fees of those children whose parents could not meet the expenditure, a provision rendered unnecessary by the recent remission of all fees. The Scotch act, by a sweeping clause, made compulsory attendance universal; the English act left the matter of compulsion to local managers. A subsequent act (1878) fixed the standard of exemption in Scotland at the fifth, which pupils should pass at 11 years of age.¹ In 1883, the upper limit of compulsory attendance in Scotland was raised to 14 years.

The statistics of enrollment or number of registered pupils and of average attendance may be regarded as the index both of popular sentiment with reference to the schools and of the successful administration of the compulsory clause. These considerations give interest to the following data:

Enrollment.—The total number of schools borne on the grant list in 1889-'90 have an enrollment (*i. e.*, number on registers) of 673,566, or 82 per cent of the estimated number who might avail themselves of the school provision. These figures are higher than the corresponding figures for the previous year, showing a continuance of the increase in school attendance, that has been going on from year to year, since the passage of the act. Of the specified total 2.42 per cent were below 5, *i. e.*, the lower age limit of compulsion, and 2.20 per cent above 14, the upper limit.

The number of schools actually inspected, which was a little below the number on the list, showed a total registration of 664,466, of whom 586,623 (*viz.* 303,964 boys, 282,659 girls) were present at inspection. From this item it appears that the boys outnumber the girls.

Average attendance.—In comparing the average attendance upon the schools of Scotland with that of other countries, and especially with our own country, it is important to keep in mind, not only the uniform compulsory law, but the requirements as to attendances in the case of schools claiming a share in the grant. Every such school, as in England, must have met for at least four hundred sessions during the year, moreover by far the larger part of the grant is now reckoned on the basis of average attendance. The mode of arriving at this item is as follows:

The average number in attendance for any period is found by adding together the attendances of all the pupils for that same period, and dividing the sum by the number of times the school has met within the same period.

¹Standard in Scotland as in England corresponds very nearly to grade in the United States. The work of each standard is intended to cover a year. To pass the fifth standard a pupil must be able to read with expression a short passage of prose or of poetry; to write a short dictation exercise, and to perform examples in simple proportion and the four elementary rules as applied to common fractions.

Attendance at a morning or afternoon meeting may not be reckoned for any pupil who has been under instruction in secular subjects less than two hours if above or one hour and a half if under 7 years of age.

Exceptions to the foregoing requirement are made in the case of half-timers, *i. e.*, children who are permitted to engage in remunerative labor for a portion of the day, and for those who live at a great distance from any efficient school; these having the advantage of the following provisions:

Two consecutive hours are reckoned as an attendance and a half in the case of—

1. Pupils who have passed the third standard, and are: (a) Employed under any half-time act. (b) Over 10 years of age, and certified by the managers to be beneficially and necessarily employed at work when not at a school.

2. Pupils residing 2 miles or upwards from a suitable State aided school. Attendances may not be reckoned for any scholar in a day school under 3 or above 18 years of age.¹

Pupils coming under these special provisions must have attended, however, not less than 150 times in the course of the school year, while the sum of their additional attendances and the required attendances must not exceed three-fourths of the number of school sessions during the year.²

While the above provisions tend to foster regularity in school attendance, it should be remembered that a large proportion of the parishes of Scotland, by reason of their natural configuration, present great obstacles to school attendance. This is particularly true of the insular parishes and those of the northern Highlands. Special grants have, however, done much to overcome these difficulties in the last five years. Making all due allowances for these conditions, the attendance has not yet reached an average satisfactory to the department or to the boards.

Statistics of attendance.—The statistics show that in 1889-90 an average attendance was reached of 519,738, or 88 per cent of the enrollment. This average attendance was equal to 12.65 per cent of the population, as against an average attendance equivalent to 6.29 per cent of the population of 1872-73. The average attendance upon night schools was 10,766, or four times the attendance in 1872. The maximum attendance upon these schools, however, was reached in 1880. The falling off since that date is compensated by the greater advancement of the pupils upon entering.

Irregularity of attendance and early withdrawal under the exemption provisions are evils with which both the local authorities and the department are continually striving. Early in 1891 the school boards held a general conference in Edinburgh on the subject, and various means of promoting attendance were considered.

The Glasgow board employs a system of bursaries to induce poor children to prolong their studies through the sixth standard or higher. It was agreed at the conference that twelve years, *i. e.*, the age assigned for the completion of the exemption standard, is altogether too early an age for ceasing school attendance.

Effects of remission of fees.—There has not yet been sufficient time to determine the effect of the remission of fees (accomplished in part in 1889, and virtually completed in 1891) upon school attendance. Apparently, however, it will increase the attendance of pupils in the com-

¹ Code 1890.

² Code 1891.

pulsory ages, and cause a falling off in the attendance of those below 5 and above 14 years of age. This is especially regretted in the case of the youngest pupils, *i. e.*, those below 5, whose attendance increased under the impulse of the first provision for free instruction. Commenting upon these indications the London Times says:

In 1839, just before free education was introduced, out of every 10,000 children attending Scotch elementary schools, only 193 (against 976 in England) were below 5 years of age. In 1890 that number had increased to 242, and there was every indication of still further improvement in the same direction. At the very time, however, when English children between 3 and 5 were being freed from the charge of fees, school managers in Scotland are sorely tempted to recommence exacting fees for children of those ages, so undoing the good work they have just been beginning.—[London Times, October 8, 1891.

5. FINANCES.

The income of public elementary schools is derived from the parliamentary grant, rates (local taxes), subscriptions, and since October, 1889, an allowance made for the remission of fees, which up to that time furnished about one-third of the revenue. Private schools under inspection draw nothing from the rates.

Income.—The entire income of elementary schools, day and night included, amounted in 1889-'90 to £1,137,844 (\$5,689,220). The cost of maintenance was a trifle less, £1,127,057 (\$5,635,285).

Expenditure.—The expenditure for day schools was derived as follows:

	Sources.	Per cent.
Parliamentary grant.....	£486,408	43.67
Rates.....	244,516	21.96
Fees and allowances in lieu of fees.....	355,331	31.91
Voluntary subscriptions.....	27,384	2.40
	1,113,639	

The cost of maintenance per capita of average attendance was £2 4s. 4d. (\$11.05) in public schools, and £1 9s. 8½d. (\$7.43) in voluntary schools. These rates have been gradually rising during the last decade, but were slightly lower in 1890 than in the previous year. Public schools show the least increase, viz: 1s. 8½d. (42½ cents) in the decade, and Free Church schools the greatest, viz: 6s. 3½d. (\$1.57).

The amount credited to the local taxes (rates) in the above tabulation is exclusive of any outgoes for buildings, interest on loans, etc. The entire expenditure from this source was estimated at £559,273 (\$2,796,365) or £1 6s. ¼d. (\$6.50) per capita of average attendance in public schools. Exact financial comparisons with the first year of the operations of the act can not be made with the data at hand; it is apparent, however, that the parliamentary grant was about three and one-half times as great in 1889-'90 as in 1872-'73.

6. SUBJECTS AND STANDARDS OF INSTRUCTION.

In the act of 1872 a very decided stand was taken in favor of that conception of education which had been consecrated by the parish-school statute of 1846, in which education was treated as an integral process, extending from primary schools to the university.

It was expressly enjoined in the act that care should be taken to preserve the standard of education existing in the public schools of Scotland at the time of its passage.

As to burgh schools, it was ordered that they should be managed with reference to giving instruction in the higher branches, and that to this end the school boards of the respective burghs should provide a sufficient number of elementary schools elsewhere in the burgh. The higher-class schools, it should be observed, while sharing in the rates, did not participate in the parliamentary grants; on the other hand, their funds were not to go into the common-school fund, but were to be managed exclusively in their own interests. As a further evidence of the determination to preserve their prestige, teachers seeking positions in these higher schools were to be examined before a special body consisting of university professors or teachers of distinction appointed by the school board.

The distribution of the grant to elementary schools upon the results of examination has become in Scotland as in England the determining factor in respect to studies. The subjects, for which payment is allowed, are classified as obligatory (*i. e.*, reading, writing, arithmetic) and optional. The latter afford a wide range of choice among subjects which are tested by (1) collective examination, and hence called class subjects, and (2) those which may be taken by individuals, and which are known as specific.

Under the rules of the Scottish Department the obligatory branches are arranged in six grades or standards, each designed for a year's work. The English programme includes a seventh standard, which is covered in Scotland by an ex-sixth and the higher-class schools. Latin, Greek, and other higher subjects may be taught in elementary schools before the hour appointed for beginning the morning session, *i. e.*, ten o'clock; at the noon intermission, *i. e.*, between one and two, and after four in the afternoon, as was formerly the custom in many parish schools, if these subjects are not included in the regular programme of the school.

THE WORK OF THE SCHOOLS AS SHOWN BY THE RESULTS OF THE GOVERNMENT EXAMINATION.

Obligatory branches.—The system of individual examination maintained in all grades, until 1886, had this advantage, that it resulted in an annual classification of pupils according to their attainments in the obligatory subjects, and thus furnished a means of estimating the efficiency of the schools. In 1886 the experiment was made of testing pupils below the third grade (standard) by collective examination, and in 1890 this change was extended to all grades so far as regards the obligatory subjects. The classified results of examination were still given in 1889-'90 for pupils above the third standard.

Of 664,466 pupils on the registers of inspected schools in this year, 516,046 were qualified by age and number of attendances, to be presented for examination; 238,820 were examined collectively in standards below the third, and 233,181 individually in standards above.

The following table shows the classification of the latter by age and by grade, and also brings into significant comparison with these data the number of pupils above 10 years of age examined in each standard, *i. e.*, grade:

Table showing for each standard, (a) The age at which the standard ought to be passed; (b) The number of scholars of that age on the registers of aided schools inspected in 1890; (c) The number of scholars examined in the standard; (d) The number above 10 years of age examined in the standard.

Standard.	(a.)	(b.)	(c.)	(d.)
III	9	85,130	72,363	32,338
IV	10	84,905	70,256	66,955
V	11	78,582	62,377	62,304
VI	12	60,375	28,185	28,184

In commenting upon this exposition of the work of the schools, the committee say: "We must again draw attention to another point in which the statistics afford matter of regret, *viz.*, the insufficient presentation of children in the higher standards. Of 270,760 children on the register of schools whose age qualified them for examination in three upper standards only 170,070, or 62.81 per cent, were presented in or above those standards. The table shows that of the scholars actually examined in standard third, who should all have been under 10, only 55.31 per cent were under that age and 44.69 per cent were over it. A similar backwardness must, we fear, extend to the higher standards."

Optional branches.—Of 3,075 departments (exclusive of infants' departments) examined during the year, optional class subjects had been taken in 3,036. Besides English, which was taken in 3,035 cases, 2,946 departments took history and geography; 545 needlework, and 143 elementary science. The grant for optional subjects was awarded upon an average attendance of 410,163 pupils above 7 years of age, distributed in 2,997 departments; the average payment allowed for these subjects was 4s. 2d. per capita.

Of 51,000 scholars presented in specific subjects for individual examination, 6,231 were examined, and 4,793 passed in three such subjects; 17,410 were examined, and 13,922 passed in two such subjects, and 25,129 passed in one subject. The subjects generally taken were physical geography, domestic economy, French, animal physiology, Latin, and mathematics. In addition to the subjects specified above the report states that military drill is systematically taught in 352 schools; cooking formed part of the course in 303 schools, payment being made for the same in behalf of 12,168 girls at 4s. and for 784 at 2s.

Teachers in many instances seek to promote habits of economy by establishing school banks; 80 of these institutions were reported in 1889-90 and also 238 school libraries.

To sum up the results of the examination it appears that in 1889-90 for every 100 pupils in day schools who had made the requisite number of attendances, 14 were below and 87 above 7 years of age; 55 were examined in standards below the third and 45 in standards third to sixth; 80 earned grants for additional class subjects and 10 for specific subjects.

Effects of payment upon results.—As the parliamentary grant represents about half the income of the schools, the mode of its distribution

must naturally have a powerful influence upon the work of the schools. So long as the greater part of the grant was allotted upon the results of individual examination in elementary studies it tended to depress scholastic ideals.

This effect is discussed very fully by Dr. S. S. Laurie in his recent report on the Dick bequest. He shows conclusively by comparative statistics that there has been a downward movement in the higher subjects excepting in those parishes where the influence of the system in this respect has been counteracted by special funds for stimulating instruction in these subjects.¹

This conviction of the effects of the system in Scotland, where the higher subjects are specially prized, contributed even more than the opposition developed in England to bring about changes in the modes of examination and classification. Under present arrangements two-thirds of the grant² (omitting grants for optional subjects and special grants) is a specified rate (*i. e.*, 10s. to 14s) per capita of average attendance, an adjustment which has freed the scholastic work from many paralyzing restrictions.

7. TEACHERS.

Examination, appointment, salaries, and tenure.—The law of 1872 required that the principal teacher of every public school should be the holder of a Government certificate awarded upon examination. In recognition, however, of the fact that a proportion of Scotch teachers were likely to be university graduates, it was provided that a degree in arts or science should be accepted in lieu of the examination, but in this case candidates must satisfy the examiners of their skill in the theory and practice of teaching. The Government certificates are of four grades or classes. Candidates for the certificate examinations must be either students of the training colleges or must have had actual experience in teaching. No certificate above the second class is originally issued, nor can the higher class certificates be secured without successful service in the schools.

The appointment of teachers, rates of compensation, and tenure of office were left to the boards. These extensive and arbitrary powers were somewhat restricted by an act of 1882, which was intended to give teachers protection against sudden and unwarrantable dismissal, an evil which, especially in small districts, had grown to alarming proportions.

¹ Rep. to the trustees of the Dick bequest, 1890, chapters III and IV.

² The distribution of the grant in Scotland is very nearly the same as in England, for which see footnote, p. 245 of the Commissioner's report. The only material difference is a minimum fixed grant of 10s. in Scotland as against 12½s. in England, and a continuance in Scotland of grants on the report of collective examinations in the obligatory subjects. These are at the rate of 1s., 2s., or 3s. per capita of average attendance below the third standard and 1½s., 2½s., or 3½s. above.

No general pension scheme has yet been devised, but the Department awards a limited number of retiring allowances, and individual boards may make similar provision for aged or disabled teachers. This is a matter which excites great attention. The Educational Institute (an association equivalent to the National Educational Association of our own country) maintains a committee to devise a superannuation scheme and work for its adoption.

Training of teachers.—The act contained no specific provision as to the training of teachers, but the requirement that the principal of a public school shall be certificated naturally promotes attendance upon the training colleges. These share in the Government grant, payments being made in behalf of all students admitted as Queen's scholars.

The status of the teaching force in 1889-90 is indicated by the following statistics:

Number and classification of teachers.—The teaching force employed in the inspected day schools numbered 12,948. These were classified as follows:

	Num- ber.	Per cent of total.	Male.	Female.	Per cent of male.	Per cent of female.
Certificated.....	7,745	60	3,745	4,000	48	52
Assistant.....	1,320	10	159	1,170	12	88
Pupil.....	3,883	30	946	2,937	25	75
Total	12,948	.....	4,841	8,107	38	62

The number of certificated teachers, which is about two and one-fourth times the number of separate departments, has increased by 5,179 since 1872, or a little more than 200 per cent, and is equivalent to 1 for every 66 children in average attendance upon the schools inspected.

Salaries and pensions.—The average salary of schoolmasters has risen from £101 16s 7d. (\$509) to £133 9s. (\$667.25). That of schoolmistresses from £55 14s. 2d. (\$278.50) to £62 4s. 11d. (\$311.25). Besides this 1,713 masters and 483 mistresses are provided with residences free of rent.

During the year the department awarded 3 pensions of £25 and 10 of £20. Since the practice of granting pensions was resumed in 1875, 375 Scotch applications have been dealt with and 12 pensions of £30, 52 of £25, and 106 of £20, and 29 gratuities to the amount of £940 have been awarded.

Qualifications of teachers.—Of 3,738 male teachers 77.07 per cent had been students in a training college, while of 3,880 female teachers 63.12 per cent had received a similar training. The committee of council observe in their report "That of the minority, especially in the case of the male teachers, many have obtained, otherwise than in the training colleges, a training of a very valuable sort. Many teachers, of both sexes, who enter the examination as acting teachers, have acquired a knowledge of the duties of their profession by serving as pupil teachers, and afterwards as assistants under teachers of large experience and skill. Of the male teachers, again, we find that 504 are graduates, while many have been partially educated at the universities, and have also acquired experience by service in schools."

8. THE TRAINING COLLEGES.

The training colleges of Scotland, like those of England, were established by denominational effort before the passage of the education act. They retain their former relations, being subject to government inspection in respect only to the conditions upon which they may claim

a share in the public grant. Practice schools are attached to the colleges, and in some cases there is a hall in which the students are boarded and lodged.

The conditions of admission are determined by the authorities of each college, the education department simply requiring that candidates for "Queen's scholarships" should signify their intention of adopting and following the teaching profession in public schools. The course of training is two years, with an annual examination by the government inspector at each college. Certificates are awarded students who pass these examinations and fulfill successfully a probationary term of teaching.

The curriculum of the training colleges is determined mainly by the government examination. It includes for men, the elementary branches considered in relation to teaching, also school management, algebra, and mensuration, geometry, political economy, vocal music, drawing, and one or two of the following languages: Latin, Greek, French, German. The syllabus for women omits geometry, mensuration, and political economy, allows only one language (*i. e.*, Latin, French, or German), and adds domestic economy and needlework. Special arrangements are also made by which students may pursue branches of science with a view to passing the certificate examinations of the science and art department. Since 1873 special privileges have been accorded teachers who combine attendance upon university classes with the training college course, an arrangement greatly facilitated by the fact that all the training colleges are in university towns, *i. e.*, three in Edinburgh, two in Glasgow, and two in Aberdeen. This relation has been strengthened by the enthusiastic service of Prof. J. M. D. Meiklejohn, who holds the professorship of the theory, history, and practice of education in the University of St. Andrews, and Dr. S. S. Laurie, professor of the institutes and history of education in the University of Edinburgh. A new impulse has recently been given to this part of the work of teachers' training by the action of the endowed schools commission. This body set aside the sum of £250 (\$1,250) to be given annually as bursaries of not less than £25 each to training-college students in Glasgow, who have already taken two sessions at the university, and who bind themselves to compete for a degree in arts or science.

Statistics of the training colleges.—The training colleges are seven in number, six being coeducation schools, and one for women only. They were attended in 1890 by 852 students, *i. e.*, 294 men, and 558 women. With such an attendance they can furnish each year rather more than 400 teachers, a number nearly sufficient to make up the estimated annual loss (calculated at 6 per cent) in the teaching force. Of the students in attendance 152 availed themselves of the arrangements for combining attendance upon university classes.

The examinations of 1890 were successfully passed by 730 candidates, of whom 417 (138 men and 279 women) were students of the colleges and 313 (75 men, 238 women) acting teachers admitted to examination.

The staff of the training colleges, practice schools included, numbered 73 persons, and the expenditure for their maintenance amounted to £37,083 10s. (\$185,417.50).

9. ORGANIZATION AND MANAGEMENT OF SCHOOLS.

The Scottish system of education, as we have seen, makes a nearer approach to uniformity than the English. It is, however, far removed from a centralized system such as that of France or even from a system deeply penetrated and permeated by the will of a central power like that of Germany. Indeed, in the Scotch system local authority is excessive, and is so often exercised in a capricious and narrow spirit that the teaching fraternity are forced to combine against it. Discontent with hampering conditions manifests itself in ways with which we are familiar in this country; they may be summed up as a general opposition to small areas of administration, and to boards which represent only the unprofessional and niggardly spirit of small districts. Local independence, at first sight, seems to be much more limited with respect to the organization and conduct of schools than to the control of the teaching service. In reality, however, the conditions of uniformity in schools, imposed by the department, are few and specify only minimum requirements for participation in the grant. They relate to the capacity of schoolrooms (80 cubic feet and 8 square feet of area for each child in average attendance being the specified dimensions), lighting, ventilation, etc., the number of sessions, and the composition of the teaching staff. The principal teacher must be certificated, and an assistant pupil teacher must be provided for every 30 pupils in average attendance above the first 60, or an assistant adult teacher for every additional 50 pupils, or an additional certificated teacher for every additional 70 pupils.

Outside of these provisions, and even within the range of interpretation which may be put upon them, there are all the differences of actual status which arise from diverse degrees of public or liberal spirit in communities, from the opposite effects of sparse and dense populations, and from dissimilar social and industrial demands. A comparatively extensive rural parish with a school census of thirty children can not be leveled up to an urban district with a school population running into the thousands, easily accessible to centrally located buildings. These differences may be illustrated by the reports of typical districts.

Mr. Waddell, inspector of a district in the western division of Scotland, says:

A number of small schools in various parts of the district—such as Tullibardine, Gleneagles, Glendevon, Kinbuck, Cleish, Arus, and Chapel Green—remain to be considered. Each of these would be very much improved by material alterations, in some cases structural, in others internal, but not precisely on the ground of defective accommodation. In outlying districts, nowadays, the question rarely is of that nature, rural parishes tending rather to lose than to acquire population. The difficulty in their case rather is to secure, with perhaps a falling valuation roll, a rise in the conception of what is due to comfort, neatness, and the educational views of the time. How far it is proper to interfere in such cases will always be matter of opinion, and the discussion of the question with managers requires delicate handling. If a reference be made to the official instructions (1886) the mark "excellent" is intended

to be reserved for cases of exceptional merit, and will depend upon the estimate formed in regard to the *premises*, discipline, etc. Some one of the managers is almost certain to urge that the building was approved at its erection as meeting all requirements. True; and a ship launched at the same date was classed A-1 for the time, though now docked for extensive repairs.

No educational problem would benefit more by a sweeping extension of school-board areas than that of school supply. The school places actually existing in the district are probably almost sufficient in total amount for the wants of the population; it is the distribution of them mainly which is imperfect. Nor can any comprehensive and economical scheme of school supply be framed by a large number of small bodies, often with conflicting pecuniary interests. Such a conflict of interests is actually arresting improvement in one locality at the present moment.

Mr. Fraser, inspector of another district of the same division, says:

In the Mull schools allotted to me only two pupils were presented in Gaelic. They read out of Matthew's Gospel with ease, and translated with tolerable accuracy, but they knew very little of the grammar of the language. As far as my observation extended, it did not seem to be considered necessary to give systematic bilingual instruction to the children in most of the schools in this district. In one or two cases it certainly appeared as if the children did not exactly comprehend what I said to them when I addressed them in English, but these cases belonged entirely to the lower sections of the schools. I have reason to believe, however, that although no regular course of bilingual instruction is given, the teacher (when he knows Gaelic) frequently interprets an English word by a familiar Gaelic term. I found that comparative ignorance of English was, as a rule, combined with a kind of rustic diffidence which the asking of a question in Gaelic frequently dispelled. One of the pleasant surprises of my visit was to meet with such superior reading and general intelligence, in connection with the small side school of Gribun, on the western seaboard. It is my deliberate impression that under proper conditions of school management no children are more responsive to the stimulus of sound instruction than Highland children. Their isolation from the busy haunts of men increases their wonder and curiosity, and for natural shrewdness and sagacity and capability of taking on the marks of the higher civilization they will compare favorably with Lowland children. Given painstaking and wise teaching, and the best results will follow.

Mr. Muir, an inspector in the northern division, writes:

Many Shetland children labor under great disadvantages. Mr. Robertson's remarks on the way in which population in the West Highlands is gathered into centers do not apply to Shetland. Half a dozen houses constitute quite a considerable hamlet there. The work that is done in these islands is often highly praiseworthy. A stranger unused to schools who chanced to be visiting Shetland in company with the Government official, might be inclined to think that too high a standard of education was looked for, that it was unreasonable to give, in districts far from kirk or market, work to be done that might be reasonable enough in Dundee, Montrose, or Aberdeen. In some schools the children would answer rather miserably, and the stranger would be inclined to say, "Quite natural. Far too much has been expected." The inspector might then take the stranger to some school 3 or 4 miles off, frequented by a similar class of children, whose local circumstances were as bad as those of the first school, if not worse. There he would find results distinctly better. Another teacher comes and the results are suddenly poor. An inspector comes to a school that has been doing badly, and, lo! the examiner next year would be inclined to think that thirty or forty clean, well-behaved, intelligent children had been imported into the parish. I do not wish to point out individual schools, but there are cases which will occur to any Shetlander who reads this where in the midst of educational fertility some one school has remained dry, like Gideon's fleece.

The reports of city boards, on the other hand, are full of evidences of activity and progress. The triennial report of the Glasgow board (1888-1889) states that accommodation had been provided during the three years in new or enlarged buildings for 10,314 pupils, and enumerates among the increased facilities for educational work drawing rooms, laboratories, and lecture rooms. The report of the Edinburgh board for the same period gives the following data with respect to a projected new building:

In July, 1888, steps were taken to secure a site for a new school in the south-west of the city, and in February, 1889, Millerfield House and grounds, having an area of nearly an acre and a quarter, were purchased for £5,620. Plans for a school on this site were prepared by the board's architect, and approved by the Scotch education department. The estimated cost, inclusive of site, is £27,300. The school, to be known as "Sciennes School," is expected to be ready for occupation before the close of this year. Accommodation is to be provided for 1,317 pupils, calculated at the rate of 10 square feet per pupil in the juvenile department and 8 square feet in the infant department. In addition, four rooms will be specially fitted up for the teaching of drawing, cookery, and science, two of these with accommodation for 100 pupils each, and two for 81 each. Advantage has been taken of the sloping nature of the site for providing a large swimming bath and gymnasium in the basement floor. The heating and ventilation of the school will be done by what is known as the mechanical system. The ceremony of laying the foundation-stone was performed on the 24th May, 1890. This school, when completed, will certainly be one of the very best in Scotland.

These reports bristle with discussions of familiar topics, physical training, drawing, practical cookery, training in music, the care of destitute children, special teachers, etc. Some idea of the effort made by the Edinburgh board to provide efficient instruction in branches outside of the required program may be formed from the fact that on a total force of 551 teachers employed in 23 schools, there were in 1891, "sewing mistresses, 24; singing masters, 7; sewing assistants, 20; cookery teachers, 3; gymnastic instructors, 4."

10. RECENT EXPANSION OF THE SYSTEM.

General provisions.—The system whose structure is here outlined has been greatly expanded by legislation and by rulings of the Department during the last six years.

In addition to the change from individual to collective examination in the lower standards, introduced in 1886, the code for that year also increased the scope of night schools, thereby enhancing their benefits for the artisan class.

The most momentous change in the system, however, was effected in 1889, when Scotland decided to devote a sum yielding £250,000 (\$1,250,000) annually to the relief of school fees. This purpose went into effect October, 1889, at which time the compulsory standards from the first to the fifth, inclusive, were made free in 3,041 out of 3,126 schools, while in 774 the benefits of free education were extended further.

The fund appropriated for this purpose became available by the local

government act of 1889, under which revenues derived from the probate duty were granted to school boards for the relief of fees. A minute of the Education Department regulating the application of the fund was issued August 26, of the same year.¹

The local taxation act of 1890 placed a large sum derived from customs and excise at the disposal of the county councils. Of this £40,000 (\$200,000) was granted to the school boards for the purpose of extending the limits of free education. By a minute of June 11, 1891, exemption from fees was granted to all pupils between the compulsory age limits. This, it should be observed, was an extension as regards standards, but a limitation as regards age.

In respect both to freedom of classification and the remission of fees, Scotland set the example to England.

Provision for special classes of children.—In developing the system of education the wants of special classes have not been ignored. The original act, as we have seen, included blind children in the compulsory provision. In 1890 an act was passed dealing with the education of blind and deaf-mute children, and the sanction of the treasury was obtained for special grants to any institution providing for their training. The special needs of the Highland parishes, arising from their sparse and scattered populations and peculiar topography, were the constant subject of solicitude under the parish system. Since the passage of the education act commissions of inquiry have been appointed from time to time to report upon these regions, and in 1884 specially liberal grants were offered to the schools in these districts on such terms as seemed likely to increase the attendance. In 1889-90 the conditions for receiving this grant were fulfilled by 581 out of 661 schools, with excellent results. The amount paid out under this head was £5,972 (\$29,860).

11. MOVEMENTS AFFECTING HIGHER CLASS SCHOOLS.

While these efforts have been expended in the sphere of elementary education very important movements have taken place affecting the higher grades of education. An act of 1878 made provision for the Government inspection of higher class schools at the request of the respective boards and also increased their pecuniary resources.

The sphere of Government inspection was extended by the educational endowments act of 1882. This act constituted a commission to draft schemes for the revision and reorganization of the educational endowments of Scotland, and required that each scheme should provide for the periodical inspection by the department of the schools dealt with. The successive measures for systematizing the operations of higher schools were completed by an act of 1886, which defined the functions of the department in this respect. Three classes of higher

¹Rep. of Committees of Council on Education (Scotland) 1889-90, pp. 110-111.

schools are now under inspection by the department: high schools the costs of whose inspection are partially defrayed from the public treasury, endowed schools which must pay the expenses from their endowments, and private schools applying for the privilege and paying the costs. Of the 54 secondary schools inspected in 1890, there were of the first class 23, of the second 22, and of private schools 9. The system has been completed by the institution of a leaving certificate examination, which indicates the standard attained by candidates, and is accepted in lieu of various professional examinations and for the preliminary examinations in both Scotch and English universities. The number of candidates for this certificate increased from 972 in 1888 to 3,120 in 1890.

12. AUXILIARY AIDS TO EDUCATION.

Educational associations.—Scotch teachers have not been unmindful of the advantages to be derived from union. The Educational Institute was founded as early as 1841, and chartered three years later, with a membership of 1800. It now numbers 3,600 members and has an accumulated capital of about \$10,000. Its discussions cover the entire province of education, but chiefly with reference to elementary instruction.

The Borough and Parochial Schoolmasters' Association watches over the interests of teachers, and, among other measures having this end in view, maintains a fund for the widows of schoolmasters, amounting in 1891 to £114,006 18s. 1d. This fund is kept up by annual contributions ranging from £2 2s. to £5 5s. from each member of the association.

The annual pensions allowed from it are of four grades, viz, £16 10s., £24 15s., £33, and £41 5s.

In addition to these general societies, there is an association of headmasters of secondary schools. To the efforts of these societies must be attributed the beginning and much of the success of recent measures affecting popular education.

Women's educational societies are numerous and have been particularly active in promoting the various phases of university extension. Among the most noted of these are the Glasgow and Edinburgh associations for promoting the higher education of women and the association for promoting the medical education of women.

Since 1870 a great impetus has been given to secondary education in Edinburgh by the Merchant Company. The schools supported by the endowment of this company have been reorganized and afford now a very high order of training for both boys and girls at about half the usual charges.

In 1891 these schools were attended by 6,362 pupils, under the control of 280 teachers. The value of the accumulated funds was £662,423 (\$3,312,115). Of the income therefrom, £31,000 (\$155,000) were ex-

pended for teachers' salaries. The extraordinary success of pupils from these schools in local examinations, competitive examinations for scholarships in both English and Scotch universities, and in civil service examinations is the best proof of their efficiency.

Educational bequests.—Education has been fostered by many bequests for the promotion of secondary and superior instruction, or for popularizing special subjects. Reference has already been made to the most notable of these, *i. e.*, the Dick bequest, of which a somewhat extended account is given in the historical review.¹ This liberality follows many old precedents.

Among the richest funds dealt with by the commission on educational endowments is the Heriot trust, Edinburgh, bequeathed by George Heriot in 1621, and yielding now an annual income of about £24,000 (\$120,000). In the reorganization of this endowment Edinburgh secures a fine technical school, the Watt Institution and School of Arts having been transferred to the "governors" of the fund. Henceforth the institution will be known as the Heriot-Watt College. It is very fully equipped with laboratories and will provide general and technical education for men and women. From the same fund a system of bursaries for the aid of poor students is established in the University of Edinburgh.

In accordance with a scheme framed by the same commission, west Scotland secures also a fine institution, namely, the Glasgow and West of Scotland Technical College. This institution is formed by the combination of "Anderson's College," a scientific institution founded by bequest in 1795; the "Young chair of technical chemistry connected with Anderson's University," founded in 1870 by a bequest of £10,500; the "College of Science and Arts," which originated in popular lectures instituted by Dr. Birkbeck in 1800; "Allan Glen's Institution," a school for practical education, endowed in 1847-48, and the "Atkinson Institution," founded in 1833, for the benefit of artisans. The order uniting these institutions bears date November 26, 1886. The medical school, which was instituted in 1799 as a department of Anderson's College, was detached by the order and given a separate organization.

The Gilchrist educational trust was the bequest of Dr. Gilchrist, of Edinburgh, one of the beneficiaries of the Heriot Hospital. Having amassed a fortune by his talents and industry he emulated the spirit stamped upon his alma mater by devoting the bulk of his estate for the benefit, advancement, and propagation of education and learning in every part of the world.

Dr. Gilchrist died in 1841. In 1865 his bequest was estimated at £100,000 (\$500,000). The trustees have executed the wishes of the testator by establishing scholarships in Edinburgh, London, and other centers of learning, and by maintaining popular scientific lectures.

THE UNIVERSITIES OF SCOTLAND.

The universities of Scotland have been more intimately related to the life of the common people than those of any other country. In this respect, even more if possible than in their constitution, they present a marked contrast to the English universities. To their democratic spirit may be traced many of the characteristics which differentiate the Scotch people and policies from those of England. To their widespread influence, to the ambitions which they awakened, and the opportunities which they brought within the reach of the whole body of Scottish youth is due, in large measure, the independent and honorable part that Scotland has played in the history of the United Kingdom.

This popular character of the universities has been fostered by the curriculum of the common schools; by the easy passage from the schools to the higher institutions; by the inexpensive mode of student life in the university towns, and by the great number of scholarship funds available for the poor. These conditions, however, have not been without their disadvantages. Of these, the chief are the low entrance standards and the consequent forcing of preparatory instruction upon the university professors, the concentration of the forces of the universities upon the training required for remunerative careers to the detriment of liberal education, and the neglect of those activities by which the province of knowledge is continually expanded.

These are evils whose continuance would be fatal at the present time. Not only has the realm of attainable knowledge been vastly extended within this century, but what is even more patent to the Scotch mind, its utilitarian applications have been greatly multiplied. Reform of the universities was not only necessary if Scotland would retain her reputation for general intelligence, but indispensable to the increase of her material resources and business prosperity.

As a result of long-continued efforts a Scotch universities act was passed in 1889. This act provided for the reorganization of the four universities; for the elevation of their standards; the enrichment of their curricula, and the increase of their resources. An executive commission was appointed to draft ordinances for the accomplishment of these purposes. The work of the commission was finished September, 1891, and its propositions are now undergoing the critical examination of the university courts. Thus it appears that the universities are on the eve of important changes whose exact nature can not be stated at this moment. As regards the constitution of the universities, the most decided change effected by the act of 1889 relates to the university courts.

The governing bodies of the universities are in each, the senate (*senatus academicus*), the general council, and the university court. The council is a deliberative and advisory body. The senate, which consists of the principal and the professors, prior to the act of 1889 had

the administration of the financial affairs of the university, subject to the supervision of the court. This power has now been transferred to the latter body, and the senate simply regulates teaching and discipline. The membership, as well as the authority of the courts, is increased by the recent act. The head of each university is the chancellor, who is elected for life by the general council. All measures proposed or approved by the university court must receive his sanction. Each university also has a rector, elected annually by the students (in Glasgow and Aberdeen this election has been by *nations*, a relic of the past, which will disappear in the new order). These officers are included in the organization of the courts, and each nominates one additional member. Students, whether matriculates or alumni, have heretofore had little part in the management of their universities. Recently they have taken vigorous measures to secure recognition in these matters. Following this initiative the commission was instructed to provide for the legal constitution of the newly formed students' councils and for their representation in the university courts.

The Scottish universities are not like the English aggregations of colleges. The collegiate foundations existing originally at Aberdeen were merged into each other by the universities act of 1858. Two of the three colleges of St. Andrews were united in 1747, the faculties of arts and medicine being assigned to them. Theology remained with the college of St. Mary, which has its own principal and its distinct organization.

The commissioners, under the universities act of 1889, have affiliated the university college of Dundee to St. Andrews. In this relation it is to retain its original character as a college for men and women, in which no religious test shall be required, either of professors or students. The other three universities, Glasgow, Aberdeen, and Edinburgh, comprise each the four faculties of arts, law, medicine, and theology.

The universities send two representatives to Parliament, the general councils of Glasgow and Aberdeen being empowered to elect one and those of Edinburgh and St. Andrews the other.

The Scotch universities have taken part in the popular movements of the last decade. They maintain local examinations for secondary schools and students. St. Andrews has been particularly active in promoting the higher education of women, having instituted the special degree of L. L. A. (lady literate in arts). Edinburgh also grants a certificate in arts to women. Aberdeen has recently appointed a lecturer on education, following thus the precedent set by Edinburgh and St. Andrews.

The four universities are united in a scheme of university extension. A committee of the senate of St. Andrews University has been formed for the purpose of aiding Scottish students in Paris and other French towns and of reviving the friendly relations which existed in the past between the universities of the two nations. Aberdeen is moving for the restoration of its old buildings, famed for their architectural beauty,

and, in common with the sister universities, is seeking means for increased equipment for instruction in science.

Edinburgh has been exceedingly fortunate in securing buildings and equipment suitable for the new demands.

In 1873 a committee was formed and an appeal made to the public for subscriptions for the purpose. By this means £148,548 2s. 5d. were secured, which, with a grant of £80,000 received from Government, and interest, rents, and value received for old material, amounted to the sum of £244,587 4s. 8d. The university new buildings were begun in 1878 and partly opened for teaching purposes in October, 1880. They were transferred by the committee to the university in October, 1888.

The building which will complete the group of the university new buildings, a school of medicine, is the M'Ewan Hall, the gift of William M'Ewan, esq., M. P., Edinburgh. The hall will accommodate 3,000 people and has been especially adapted to public ceremonials. Here degrees will be conferred, examinations conducted, and concerts, public lectures, etc., be given. Provision has been made for the accommodation of an orchestra of over 300 performers and for a great organ. This hall was begun in 1889 and will probably be completed in 1892.¹

The university is now prospecting for a students' hall, which will aid effectually in promoting social relations, the absence of which has been a serious disadvantage in the past.

The salaries of professors vary greatly in the four universities, ranging, according to a recent return, from £234 (\$1,170) to £3,450 (\$17,250). The large amount of leisure time left to many of the professors adds to the value of their positions.

The Scotch universities have but little revenue from properties or funds, deriving their income chiefly from fees and from the annual Parliamentary grant. To the Government also they look for a large proportion of the funds required for new buildings and equipments. In 1889 the grant for the four institutions was £19,025 (\$95,125).

Recent calendars present the following statements of income:

	Year.	From fees.	From grant.	Total.
Edinburgh.....	1888-89	\$57,825	\$27,300	\$196,200
Glasgow.....	1889-90	31,997	a 34,745	126,595
Aberdeen.....	1887-88	13,312	18,935	63,019

aOf this amount \$13,840 was a special grant from the treasury.

Besides the incomes here stated there are the incomes of trust funds for bursaries, scholarships, etc., in aid of students, which are not included in the totals given for Glasgow and Aberdeen. In the former the amount from these sources was \$66,694, and in the latter \$42,729.

Among funds for special purposes is the bequest by Lord Gifford of

¹ See Edinburgh University Calendar, 1890-91.

£20,000 (\$100,000) to each of the four universities, for the maintenance of popular lectures on natural religion.

The university libraries appear to be flourishing. Glasgow reports 100,000 volumes, Edinburgh 177,000 volumes and 3,000 manuscripts, some exceedingly rare in the general library, and 10,000 volumes in the theological library.

Among the most important proposals submitted by the commissioners appointed under the universities act, are those relating to the courses and degree requirements in divinity. These contemplate freeing the faculty from sectarian trammels, leaving this field to denominational schools. The latter are numerous, the Free Church alone maintaining 14 theological colleges, with about 850 students, and from 50 to 60 professors.

The commissioners also advocate the admission of women to graduation in one or more faculties, and provision for their instruction. Of this proposition the *Journal of Education* says:

Where and when possible there are to be full university privileges for women; meanwhile they are to be granted degrees after attending classes in recognized institutions or under recognized teachers. At present, none of the universities have room for women in their class rooms, but with a stringent entrance examination they might have. But whatever practical arrangements may have to be made, the important fact is that the commissioners have conceded all that is claimed by the advocates of university education for women.

This ordinance is the logical outcome of the efforts of a company of women who with firm spirit and united powers have striven to break down the narrow prejudices of Scotch professors.

Queen Margaret College, Glasgow, established in 1883, was one of the early triumphs of the Glasgow Association for Promoting the Higher Education of Women. To this a medical school has recently been added.

The Edinburgh association has long maintained classes to prepare women for the Edinburgh certificate in arts.

The liberal proposals of the commissioners are in striking contrast to the spirit manifested twenty years ago, when Miss Sophia Jex-Blake was forced to abandon the effort to secure her medical training in the Edinburgh faculty.

The present status of the universities is set forth very clearly in the following review of the work of the commission, taken from the *London Times* of October 27, 1891:

THE WORK OF THE SCOTTISH UNIVERSITIES COMMISSION.

EDINBURGH, *October 23.*

The Scottish University Commissioners have now issued a considerable number of draft ordinances, which are at present undergoing criticism from the university courts, the senates, and the general councils of the different universities, and from the press. The most important ordinances sent out down to the present time are those dealing with graduation in arts, graduation in science, and regulations for examinations in all the universities, and those dealing with graduation in medicine and the institution of a faculty of music in the University of Edinburgh. Of these ordinances that which ordains regulations for degrees in arts and for the constitu-

tion of boards of studies is the most important, because it deals with that department or sphere of university work in which it is universally admitted that reform is most required. In none of the Scottish universities, for example, is there at present a compulsory entrance examination, while in all of them there are elementary classes in Latin, Greek, and mathematics, which are simply rivals, under very unfair conditions, of the secondary schools.

Again, in most of the universities there are chairs in the faculty of arts which are placed at a great disadvantage because attendance on them does not count for graduation. In the University of Edinburgh, for instance, there are eighteen chairs in the faculty of arts, but only seven of these are of any account in connection with the granting of degrees. These are the grievances which call most clamantly for redress. Another grievance is that the college session lasts only for six months in the year and that no use is made of the summer months; while it is a further complaint that the professors enjoy a monopoly of teaching, and that no recognition is given to extra-mural or *privat doцент* teaching. It is admitted that the draft ordinance just issued meets most of these objections to a certain extent. It institutes an entrance examination; it provides for a summer session; it provides, or appears to provide, a wide variety of options in the subjects or classes qualifying for a degree. On the other hand, it is objected to the ordinance that its concessions to the demands of university reformers are more apparent than real. Even the professors in most cases, and some of them very vehemently, object to the entrance examination on the ground that its standard is too low and that its operation would be fatal to secondary schools, while it would depress rather than elevate the standard within the universities. In mathematics, for example, the amount and the standard of work are lower than those for the leaving certificate of the Scotch education department, applicable to secondary schools.

Again, the variety of options proposed for the degree examinations is to a large extent illusory. Of the seven subjects to be required for the degree, five are compulsory, and these five must be taken from the seven which at present enjoy a monopoly, with the addition of chemistry and modern languages, for the latter of which no provision is at present made within the universities. The result is that out of an imposing list of twenty-five optional subjects, the candidate has absolute freedom of choice in the case of only two. The arrangements for the proposed summer session are also deemed unsatisfactory. The professors are to have the first right of teaching the classes, failing whom, the right is to pass to their assistants, and absolutely no provision is made for recognizing teaching graduates or extra-mural classes. This is the more remarkable because, in connection with the medical faculty in Edinburgh, the courses of extra-mural teachers are at present recognized to a large extent, and are proposed to be recognized to a still larger extent under the new ordinance of the commissioners. It is difficult to understand why they should be so liberal in connection with medicine and so conservative in connection with arts. The regulations for the degree in arts with honors are held to present unnecessary limitations and complications. The student can not, as at present, go in for honors after passing the examination for the ordinary degree, but must take an independent course in one or more of five groups of subjects; and this would compel him to decide, at an early period in his course, whether he should take an ordinary or an honors degree. The candidate, moreover, is required to take a certain number of subjects in which there are senior or honors classes, which is another means of perpetuating monopoly, as such classes exist only in connection with the chairs that are at present privileged.

The ordinance on graduation in medicine applies only to Edinburgh, and it is admitted to be on the whole very liberal in its provisions, especially as it increases to some extent, as has just been said, the number of extra-mural classes recognized as qualifying for a degree. But it provides no remedy for the admitted evil of large classes, or for the very objectionable system under which a professor who draws from £2,000 to £3,000 a year from his chair devolves a large amount of the teaching, and

nearly all the practical work, on assistants who are miserably paid and who have no academic status. There is no provision for dividing overgrown chairs, or for appointing assistant professors, or for drawing extra-mural teachers into the university system, although some of these points may possibly be dealt with in future ordinances. Neither is there any provision for giving to extra-mural teachers a share in the examination, a duty which they would be glad to perform without remuneration as a condition of their recognition as university teachers.

The tendency, if not the main purpose, of the ordinance on graduation in science is to reduce the science degree from the rank of an honors degree, which it holds at present, to the rank of an ordinary or pass degree. This, in the opinion of many persons, would not be objectionable, seeing that the doctorate of science would be retained to mark the higher or honors grade. There are, however, two weighty objections taken to the ordinance, which can not be so easily met. The one is that no sufficient distinction is made between attainments in pure science and attainments in technical science. Engineering and agriculture are put on precisely the same footing as mathematics and astronomy. The other objection is that the curriculum in science so overlaps the curriculum in arts, which contains science options, that it would be possible for a student to take two degrees (those of M.A. and B.Sc.) by passing the same, or nearly the same, set of examinations in two faculties. If this is possible, it is a serious objection to the ordinance; it ought clearly to be made impossible.

The ordinance for the institution of a faculty of music applies, like that on medicine, only to the University of Edinburgh, which enjoys in the Reid bequest a fund specially applicable to musical education and culture. The foundation has hitherto, in the opinion of most persons, been flagrantly abused. The sum of £600 a year has been spent annually on the encouragement of music; but there has been scarcely any teaching of music, and very little tangible result in any other form, though there has been a professor of music, with a well-appointed music class-room and fine apparatus at his command. The ordinance provides that the professor of music shall give the instruction in the subjects qualifying for graduation during the winter session only, and that he shall organize orchestral and other concerts in Edinburgh. But these things do not amount to more than the professor of music has been supposed to do in the past. Yet nothing, or next to nothing, has been done. What is required is some systematic regulation under which a school of music may be organized, with theoretical and practical teaching, and with a scheme of graduation corresponding thereto. A great deal must necessarily depend on the professor of music. The chair is now vacant, and it may be hoped that the next appointment will be made with a special view to the higher objects referred to above.

The ordinance on regulations as to examinations is one of the most useful that the commissioners have issued. It proposes the appointment of a board of examiners for the preliminary examinations in arts, science, and medicine, to which the four universities shall contribute in equal proportions, namely, one professor or lecturer and two additional examiners from each, who shall be appointed by the university court. The object of this arrangement is to secure that a uniform standard of entrance may be maintained in all the four universities. The scheme of rotation extending over four years is characterized by the utmost fairness, each subject being represented in each year by a professor in one university and by two additional examiners from other universities. The only objection which the very critical committee of the Edinburgh general council has been able to take to the ordinance as it stands is that it gives a power of selection to the senatus which, in their opinion, ought to be given to the university court. On a review of the situation, as a whole, it may be said that the principles of the ordinances of the commissioners are very generally approved, but that material amendments are required in details in order to make them thoroughly acceptable to the universities and to all who are interested in their improvement.

CHAPTER V.

HISTORICAL SURVEY OF EDUCATION IN SCOTLAND PRIOR TO THE ESTABLISHMENT OF THE PRESENT SYSTEM.

TOPICAL OUTLINE.

*General Exposition.*¹

Historical relations of present system; periods preceding the Reformation—First period, twelfth to sixteenth century.

- I.—Origin of schools: (a) ecclesiastical; (b) civic; (c) endowment of kings and nobles.
- II.—Foreign influences making for culture through (a) liberty of instruction; (b) establishment of universities.
- III.—Compulsory statute of James IV. 1494.
- IV.—The dawning Reformation.

*Detailed View.*¹

- I.—(a) General character of schools—sources of information; (b) particular schools; (c) power of the clergy; (d) state of the burghs.
- II.—(a) John Knox influenced by teacher from Paris University; (b) introduction of Greek language; (c) University of St. Andrews.
- III.—Citations from act of 1494 and comments on, from Grant's History of Burgh Schools.
- IV.—(a) References: Life of John Knox; "Complaynt of the Papyngo."

SECOND PERIOD, 1560—1696.

General Exposition.

Transition from a Catholic to a Presbyterian state.

- V.—Educational scheme of the Reformers; its gradual realization; transfer of schools from control of bishop to that of presbyteries; privy council directs the establishment of parish schools; a local tax.
- VI.—Act of 1646 providing for a system of education.
- VII.—Founding of the University of Edinburgh. 1582.
- VIII.—Disastrous effects of prolonged contests.

*Detailed View.*¹

- V.—Outline of Knox's educational scheme; spirit of.
- VI.—Extracts from the act of 1646.
- VII.—Original status and privileges of the University of Edinburgh.
- VIII.—Laurie on school supply; Fletcher of Saltoun on the low condition of the people.

¹ The relation between the general exposition and the details (found on lower half of pages) is indicated throughout by the Roman numerals.

THIRD PERIOD, 1696-1847.

General exposition.

THE ACCESSION OF WILLIAM AND MARY FAVORABLE TO PRACTICAL MEASURES.

- IX.—(a) Act for settling schools (1696); its scope, strength, and limitations.
 (b) Supplementary agencies, church, public, and private.
- X.—(a) New legislation; act of 1803, strengthening the parish system and increasing school supply. (b) Additional provision made by legislation of 1835.
- XI.—Burgh schools, public and parochial.
- XII.—Disruption of the church leads to new measures and introduces new tendencies.
- XIII.—High ideals of the schools and reaction upon public spirit.
- XIV.—Religious tolerance in the schools.
- XV.—Influence of the universities.
- XVI.—Results and failures of the parish system.

Details.

- IX.—(a) The church courts; media through which its authority was exercised.
 (b) Specific provisions of the act of 1696.
- X.—(a) Provisions of the act of 1803, as to schoolmasters; additional schools and free instruction for the poor. (b) Parliamentary aid for additional schools secured by act of 1835. (c) The Society for Propagating Christian Knowledge.
- XI.—Sessional schools; explanation of name.
- XII.—(a) Causes of the Disruption of the Scottish Church; rights of the congregations ignored in clerical appointments. (b) Educational activity of the Free Church.
- XIII.—(a) Province of the parish schools as shown by contemporaneous testimony. (b) Curricula of burgh schools, classical and modern. (c) Advanced conceptions of the teaching profession. (d) Bequests for education; the Dick bequest, and others.
- XIV.—Declarations of church committees as to regard shown for the rights of conscience in the schools.
- XV.—(a) Number and value of university bursaries. (b) Constitution of Aberdeen and Edinburgh universities modified by act of 1858.
- XVI.—Macaulay on the act of 1696.

FOURTH PERIOD, 1847-1872.

General exposition.

- XVII.—(a) The government assumes a new attitude toward education, increasing the amount of grants and extending its supervision. Scotland better prepared than England to coöperate with the general government.
 (b) Stimulating effects of the new policy in Scotland.
- XVIII.—Act of 1861 hastens the movement toward a civil system by transferring the examination of masters from presbyteries to university boards and abolishing religious tests.
- XIX.—Royal commission appointed to inquire into the Scotch system.
- XX.—Influence of the Scotch system upon movements in England. The distinctive contribution of each of the four periods to the existing system.

Details.

XVII.—(a) Government grant increased from £20,000 to £100,000; conditions for participating in the aid; causes of opposition in England. (b) Sources of information as to effects of grant upon Scottish schools.

XVIII.—Reference to authorities.

XIX.—Reference to authorities.

Schools and educational systems grow out of the general conditions of the life of a people, and their history is closely related to that of all other national manifestations. Nevertheless, viewed in retrospect, this history may often be traced as a distinct stream in the national current. This is especially true of Scotland, whose schools and school laws seem almost always to have been in advance of the general development.

From the earliest records relating to schools to the date of the passage of the education act of 1872 seven centuries elapsed. As regards education, they may be divided into four periods. While not separated from each other by rigid lines, each of these periods made a distinctive contribution to that totality, the educational system of Scotland.

An outline view of these periods is here presented, accompanied by detailed statements and citations from authorities which confirm or illustrate the view advanced.

PERIOD OF CATHOLIC SUPREMACY, TWELFTH TO SIXTEENTH CENTURY.

I.—ORIGIN OF SCHOOLS.

As is the case with other European systems of education, that of Scotland traces its beginning to schools established by the Catholic church in the centuries preceding the Reformation, that is, between the twelfth and sixteenth centuries. This period of ecclesiastical supremacy was not wanting in intimations of that civic concern for education which became later the marked characteristic of the country, and one in respect to which Scotland anticipated the general progress of European policies. It was manifested in the action of the magistrates and councils of burghs in establishing schools. Those, it is true, were subject to clerical control, but the right of the civil authorities to a voice in the conduct of the schools which they established was never entirely ignored. The early manifestation in the burghs is the more remarkable because it was not accompanied by the conditions of population, industrial art, commerce, or security which usually attend this form of civic activity.

I.—(a) *Schools of the period preceding the Reformation.*—The schools established during this period were chiefly grammar or classical schools, designed to prepare their students for the service of the church or for the administration of government. The church also maintained “sang schools” to train boys for choir service, and lecture or reading schools in which children were taught to read their mother tongue.

II.—FOREIGN INFLUENCE.

To the zeal of the church and the sense of public responsibilities in burghs, there were added, as a fruitful source of educational provision, the gifts of nobles and kings, which were prompted by a mingling of religious sentiment and public spirit. Through these channels, and especially through the disposition of the royal houses, the influence of other nations made itself felt in that northern kingdom. The Scottish kings desired to reproduce in their dominions the conditions that gave strength and luster to their rivals. Foreign influences also made themselves felt in the freedom of thought which asserted itself against the arbitrary and repressive supervision of the church. Liberty of instruction was contended for by teachers fresh from university associations on the continent, more especially by those from the University of Paris, which stood forth as the special champion of intellectual liberty. It was foreign teachers who first broke down the exclusive character and limited range of studies which made up the classical curriculum allowed by the church. This was confined to Latin and was but little developed on the literary side. The rectors and masters of the schools, who at first were clergy or candidates for clerical honors,

‘ Dame schools ’ for the same elementary work were quite numerous, and apparently independent of church supervision.

References to the grammar or classical schools are found in documents as early as 1100.—[Grant’s History of the Burgh Schools of Scotland, p. 2.]

The first of these schools were established in connection with monasteries. Burgh schools, created by the magistrates and by private benefactions, were numerous before the Reformation. Of 53 public schools included in the report of the education commission on burgh and middle-class schools (1868), 12 at least were in existence prior to 1560.

(b) *Particular schools*.—Individual schools and schoolmasters acquired more than local renown and attracted large companies of students. In 1550 Andrew Simpson, famous as a master and author of the “ Latin Rudiments,” was at the head of the grammar school at Perth, where he had sometimes three hundred boys under his charge, including sons of the nobility and gentry.—[Special report on burgh and middle class schools of Scotland, p. 233; see also account of Montrose Academy, p. 27; Brechinburgh School, p. 34; Dundee High School, p. 44; Dumbarton Academy, p. 127; Edinburgh High School, p. 203; Aberdeen Grammar School, p. 274; Glasgow High School, p. 304.]

In his history of Dundee, Dr. Small says: “ About the death of Alexander III, 1286, Wallace was pursuing his scholastic studies at Dundee, which at this early period was famous for the excellence of its seminaries, a circumstance that induced many of the nobility and gentry to send their children thither from a far distance to complete their classical studies.”—[For notices of the elementary schools see McCrie’s Life of Melville, p. 361; History of the Burgh Schools of Scotland, by James Grant, M. A., pp. 63, 64.]

(c) *Supervision of clergy*.—Oftentimes the chaplain of a noble house was the master of the school founded by his patron. In the Brechinburgh School these offices were united, 1717.—[Report on middle-class schools in Scotland, p. 34.]

An assistant master of the Montrose school, which McCrie calls a private seminary, is said to have been driven into banishment in 1538, by the Bishop of Brechin, for teaching his scholars the Greek testament. The grammar school at Edinburgh

enjoyed peculiar esteem, and this in time attached to the teaching profession irrespective of clerical relations.

The educational history assumes a distinctive character in the fifteenth century. James I brought from his captivity in England (1405-1424), with its episodes of journeyings in France, the passion for literature and learning, which was created in England by Wickliff and Chaucer, and maintained in France by the influence both of the court and of the universities.

The desire of the Scottish King to awaken this spirit in his own Kingdom was evidenced during his captivity by his endeavors to secure therein the foundation of a university. This purpose was accomplished directly by Henry Wardlaw, bishop of St. Andrew, who obtained the consent of Parliament for the foundation of St. Andrews University, in 1411. This, and the sister universities which followed quickly, *i. e.*, Glasgow, 1450, and Aberdeen, 1494, show that Scotland was not entirely untouched by the movement toward intellectual and spiritual emancipation which swept over middle and southern Europe.

was supported by the town council, but that body appears to have taken no active part in its management until 1562, when they made an appeal to the Earl of Murray, who held the patronage of the school, for the removal of an "obstinate papist" master.—[*Ibid.*, p. 203.]

(d) *The burghs.*—"There were burghs of barony, free burghs, burghs of regality, and royal burghs. Since 1832 there have been what are called Parliamentary burghs, that is, towns or burghs not being royal burghs, but sending or contributing to send representatives to Parliament. By the general police act of Scotland, the word burgh is declared to mean also, any populous place, the boundaries of which are fixed by the act."—[Chambers Encyclopedia, Vol. 2, p. 434.]

As to the state of the Scottish burghs in the fourteenth century, see Buckle's *History of Civilization in England*, Vol. II, Chap. II.

II.—(a) *Influence of foreign teachers.*—It is interesting to note in connection with efforts for the "liberty of instruction," that in the University of Glasgow John Knox came under the influence of John Mair (1520-22), who had been both student and professor in the University of Paris.—[McCrie's *Life of Knox*, pp. 3-5.]

[For spirited account of the resistance of the Paris University to the authority of the Jesuits, see monograph by M. A. Douarches, published by Hachette & Co., Paris.]

(b) *Introduction of Greek.*—Says McCrie, in his life of John Knox: "There were unquestionably learned Scotsmen in the early part of the sixteenth century; but most of them owed their chief acquirements to the advantages of a foreign education. Those improvements which the revival of literature had introduced into the schools of Italy and France were long in reaching the universities of Scotland, though originally formed upon their model; and when they did arrive they were regarded with a suspicious eye, more especially by the clergy. The principal branches cultivated in our universities were the Aristotelian philosophy, scholastic theology, with canon and civil law. The schools erected in the principal towns of the Kingdom afforded the means of instruction in the Latin tongue, the knowledge of which in some degree was requisite for enabling the clergy to perform the religious service. But the Greek language, long after it had been enthusiastically studied on the continent, and after it had become a fixed branch of education in the neighboring kingdoms, continued to be almost unknown in Scotland. Individuals acquired the knowledge

III.—POLICY OF JAMES IV.

The court of James IV (1483-1513) reflected in no small measure the rising spirit of the Renaissance; foreign scholars were welcomed to its midst, a printing press was set up in Edinburgh, which gave permanent form to the works of native poets, and a true passion for letters developed. The determination of the sovereign to rescue his country from ignorance and barbarity is not matter of tradition merely.

Compulsory statute.—A statute of his reign, bearing date 1494, orders all barons and freeholders to put their sons and heirs at school “from 6 or 9 years of age, and keep them there until they should have perfect Latin, under a penalty of £20.” After being perfected in Latin, the young men were enjoined to remain three years longer at the schools of “art and jure.” This was, apparently, the first attempt at compulsory education in Europe. Its effects would naturally be the diffusion of learning and culture among the ruling classes; and it was undoubtedly intended by the sovereign as a means of subduing the

of it abroad, but the first attempts to teach it in this country were of a private nature, and exposed their patrons to the suspicion of heresy. The town of Montrose is distinguished by being the first place, so far as I have been able to discover, in which Greek was taught in Scotland, and John Erskine of Dun is entitled to the honor of being regarded as the first of his countrymen who patronized the study of that polite and useful language. As early as the year 1534 that enlightened and public-spirited baron on returning from his travels brought with him a Frenchman skilled in the Greek tongue, whom he settled in Montrose; and upon his removal he liberally encouraged others to come from France and succeed to his place. From this private seminary many Greek scholars proceeded, and the knowledge of the language was gradually diffused throughout the Kingdom. After this statement I need scarcely add that the oriental tongues were at that time utterly unknown in Scotland. It was not until the establishment of the Reformation that Hebrew began to be studied, and John Row was the first who taught it, having opened a class for this purpose in the year 1560, immediately upon his settlement as minister in Perth. From that time the knowledge of Greek and the Eastern languages advanced among our countrymen with a rapid pace.”—[Life of Knox, p. 3; also notes, pp. 334-337.]

(c) *University of St. Andrews.*—In 1413 this foundation was ratified by papal bull. So great was the joy at this event that upon the return of the official who had been sent to receive the bull the clergy of the bishopric, four hundred in number, marched in solemn procession to the high altar, where the Te Deum was sung, and the citizens gave themselves up to festivity and joy.—[Grant's History of Burgh Schools, p. 15.]

“The University of St. Andrews was formed on the model of those of Paris and Bologna. All its members or supporters, as they were called, including the students who had attained the degree of bachelor as well as the masters, were divided into nations, according to the places from which they came. The nations were those of Fife, Angus, Lothian, and Albany, which last included all who did not belong to any of the three former districts.”

The university had civil and criminal jurisdiction over its members and possessed also ecclesiastical power, in the exercise of which it sometimes proceeded to excommunication. The first college of the university, St. Salvator, was founded in 1458; the second, St. Leonard, 1512; the third, St. Mary's, or New College, 1554.—[See McCrie's Life of Melville, Vol. 1, chapter v, which is occupied entirely with an account

fierce and warlike spirit of his barons, and fitting them to bear their part in a peaceful and well-organized society. It contemplated the discipline of the grammar schools, and the training of the newly-founded universities whose correlation was thus early indicated, as it has since been jealously maintained in Scotland.

The advantages of classical schools were not, however, entirely confined to the sons of the nobility and gentry, provision being often made by gifts, bequests, etc., for the attendance of poor lads of good promise.

IV.—DAWN OF THE REFORMATION.

A growing interest in learning is reflected in the literature of the time. It was an interest fostered by the influence of the Lollards, whose doctrines gained adherents in Scotland in the early part of the fifteenth century. Before its close the Reformation had become a spiritual force in Scotland and had given indications of the power which it was to exercise in the political development of the nation. The last legislative act of the period, which for convenience has been considered the first in the educational history, has affinity with the period of the Reformation. This was an act of Parliament passed in 1542 grant-

of this university. Chapters II, III, and IV give interesting particulars of Glasgow and Aberdeen.]

III.—*Statute of 1494*.—This statute assumes, as pointed out by Mr. Grant, the existence of enough schools to make its execution possible.

The purpose which animated the legislation is plainly stated in the act, namely, "that justice may reign universally throughout the realm, and that those who are sheriffs or judges may have knowledge to do justice, so that the poor people should have no need to see our sovereign lord's principal auditors for every little injury."—[History of Burgh Schools, p. 26.]

IV.—(a) For interesting particulars as to the inception and spread of the Reformed doctrines in Scotland, see "*McCrie's Life of John Knox*," pp. 18-21. (b) For evidence of the spirit manifested in contemporary literature, see "*Complaynt of the Papyngo*," by Sir David Lyndsay, 1530.

V. *Scheme drawn up by John Knox*.—The scheme of education is set forth in "*The First Book of Discipline or the Policy of Discipline of the Church*," which was drawn up by Knox and his associates in 1560. The parish school—i. e., school in connection with every "kirk"—was not intended for elementary instruction only, but comprised grammar and Latin. The colleges in towns were intended as higher schools for instruction in arts, logic, rhetoric, and languages. The rich, it is declared, should be "compelled to educate their sons at their own expense, but the children of the poor should be supported at the charge of the church, the sons of rich and poor alike, if they have aptness for learning, continuing at the schools until the commonwealth have profited of them."—[McCrie's Life of John Knox, p. 186; Grant's History of Burgh Schools, p. 77.]

There were regulations also for the three universities, which, says McCrie, discover an enlightened regard to the interests of literature, and may suggest hints which deserve attention in the present age. Among other proposals it was suggested "that there should be a reader of Greek in one of the colleges of each university, 'who shall complete the grammar thereof in three months,' and shall interpret some book of Plato, together with some places of the New Testament, and shall complete his course the same year."—[Life of Knox, p. 335.] Of this educational scheme of

ing to the people the privilege of having the Scriptures translated into the vernacular and freely circulated and read. The Bible in the mother tongue marks in Scotland, as in other countries, the first step in that movement which has become a marked characteristic of modern states, *i. e.* popular education.

SECOND PERIOD 1560-1693.

The transition from a Catholic to a Presbyterian state was, it may be said, legally effected by the passage of an act in 1560, depriving the Catholic Church of its power and repealing every statute in its favor.

The actual replacement of the old order by the new was accomplished, however, by bitter and violent conflicts, lasting more than a century. The history of education during this period reflects the successive triumphs, defeats, and persistent progress of the Reformation.

V.—EDUCATIONAL SCHEME OF THE REFORMERS.

Education was a leading feature of the scheme of government which John Knox drew up, and the agency upon which he counted for its

the Reformers, Dr. Laurie says: "It is worthy of remark that all the leading aims and principles which characterized Scottish education, and still characterizes it, were embodied in the first formal public document dealing with the subject as a matter of national policy. The external organization of schools, the democratic universality of the proposed system, the religious purpose which was to animate the teaching, the provision for the free education of the poor, the institution of bursaries to carry boys of promising talents into the higher walks of life, compulsion where needed, and the professional character of the universities, all these things were propounded by the Reformers, and they still form the text of all our educational utterances on the platform and in the press."—[Dick Bequest, report by S. S. Laurie, pp. 3, 4.]

In the preamble to the Confession of Faith, which was drawn up before the Book of Discipline, the reason for the great stress laid upon education is set forth. In this it is asserted to be "the office and duty of the godly magistrate * * * to provide, at the utmost of his power how [the Church of God] may abide in some purity in the posterity following." The state, it maintains, should be "most careful for the virtuous education and godly upbringing of the youth of the realm." No father, of whatsoever estate or condition, is to be allowed to bring up his children according to his own fantastic, but all must be compelled to bring up their children in learning and virtue.—[Dick Bequest, pp. 1, 2.]

The clergy counted upon the sequestered properties of the Romish Church for funds to establish and maintain the schools, but these had been gobbled up by the nobles, who successfully resisted the repeated applications to Parliament for restitution.—[Public Education, by Sir James Kay Shuttleworth, p. 323; second report of the Education Commission, 1867, p. xxvi.]

VI.—The spirit of the act of 1646 is shown by the following extract: "Considering how prejudicial the want of schools in many congregations hath been, and how beneficial the providing thereof will be to the kirk and kingdom, do therefore statute and ordain, that there be a school founded and a schoolmaster appointed in every parish (not already provided) by advice of the presbyteries; and to this purpose, that the heritors in every congregation meet among themselves, and provide

maintenance. The ideals which the previous age dimly suggested were here expanded and voiced as the distinct ends of a well-ordered system. This comprehended a graded series of institutions, "in every parish a school, in every notable town a college correlated to the universities," universal provision for education, compulsory attendance upon the provision, and the strong, intelligent, righteous power of the church guiding and controlling the entire work. It was a grand but arbitrary purpose, and its immediate and complete success would have shut Scotland within the narrowest spiritual boundaries that have ever been imposed upon a people.

The realization of this plan was, however, prevented by the lack of funds and by the universal turmoil. It was only piece by piece, and with continual and liberalizing modifications brought about by changing conditions, that the policy for which Knox contended was engrafted upon the nation.

In 1567, the year in which the Reformed religion was established by law, the control of schools was transferred from the Catholic bishops to the presbyteries by an act of Parliament.

a commodious house for a schoole, and modifie a stipend to the schoolmaster, which shall not be under one hundred merks nor above twa hundred merks, to be paid yearly at two terms," etc. For payment of this salary the heritors were to stent everyone's stock and teind proportionally; and on their failure to provide a school and salary, the presbytery was authorized to "nominate twelve honest men within the bounds, who shall have the power to establish a schoole, modifie a stipend for the schoolmaster, and set down a stent for the heritors, which shall be as valid as if done by themselves."—[Quoted from Dunlop's *Parochial Law*, by Sir James Kay Shuttleworth, *Public Education*, p. 325.]

VII.—The original charters of the foundation of the University of Edinburgh were all made in favor of the provost magistrates and council of the city of Edinburgh. They confer on them all powers with respect to the foundation, including the exclusive privilege of electing the principal and professors and determining their duties, and removing them when it seemed expedient.—[Report of Royal Commission of Inquiry into the state of the Universities of Scotland, 1831, p. 14.]

The new foundation was in fact only the College of Edinburgh, or the town's college. It was founded by the town council of Edinburgh under the general powers to found educational institutions granted to them by the charter of King James VI, dated April 14, 1582. From the first, the college possessed the privilege of conferring degrees.—[*Edinburgh University Calendar*, 1891-'92, p. 9.]

VIII.—The opinion is expressed by Dr. Laurie that from about 1633 onwards Scotland was pretty well provided with the means of elementary education, save in outlying or thinly peopled districts.—[Dick Bequest, p. 5.]

It was, however, after the revolution of 1688 that Andrew Fletcher, of Saltoun, published the pamphlet in which he urged a system of slavery as a remedy for "the ignorance, idleness, and lawlessness of the common people of his country." As pointed out by Macaulay, it was but a few months after the publication of this pamphlet that Parliament passed the "Act for the settlement of schools."—[Speech delivered in the House of Commons, April 19, 1847, on the proposition to increase the Government grant for education to £100,000.]

IX.—(a) *The church courts.*—The church exercised its authority through its courts, which were as follows: (1) The kirk session, composed of the ministers, elders, and

The failure of the Reformers to get possession of the sequestered properties of the Catholic church for the purposes of education left the maintenance of schools to the voluntary contributions of the church.

This, although an uncertain and inadequate source of support, served to kindle the enthusiasm of congregations which, in the lowlands at least, was tantamount to a popular interest in the schools.

It was, perhaps, as a concession to the general spirit, that in 1616, during a brief episode of episcopal supremacy, the Privy Council lent itself to the accomplishment of the fundamental part of Knox's scheme, by directing the establishment of a school in every parish where practicable, at the expense of the parishioners. This act would possess little significance but for its outcome. In 1633 it was ratified by Parliament with the additional proviso that the bishop of a parish acting with the consent of the heritors, and most part of the parishioners, should have the power to impose a "stent" for the support of the schools. Thus in lieu of the coveted church properties, events had worked to that most fruitful of all sources of school supply, a local tax.

deacons of a congregation; (2) the presbytery, composed of the ministers and an equal number of lay members in a district; this body had control over the kirk sessions; (3) the provincial synod, composed of ministers and delegated elders from the presbyteries of a district; (4) the general assembly, consisting of ministers and elders from all the presbyteries. This body attended to the interests of the whole church. The presbyteries, it will be seen, were the authoritative bodies. Their control of individual churches was absolute, and the general assembly was formed from their membership. These relations were defined in the Second Book of Discipline, which was compiled in 1578.—[See McCrie's *Life of John Knox*, p. 185.]

(b) *Provisions of the act of 1696*.—By the new act the "King, with the advice and consent of the estates of Parliament, statutes and ordains that there shall be a school settled and established and a schoolmaster appointed in every parish not already provided, by the advice of the heritors and minister of the parish." The heritors were bound by the act to provide a commodious schoolhouse and a salary not above 200 merks (\$50) nor under 100 merks (\$25). Each heritor was to be assessed in proportion to his valued rent, but might seek relief from his tenants to the extent of one-half. In case of disagreement among the heritors of a parish, the presbytery were ordered to apply to the commissioners of supplies.—[Report of the Education Commission, p. xxvii.]

X.—(a) The act of 1803 provided with respect to schoolmasters.

A (1) *As to emoluments*.—A maximum salary of 400 marks (\$111), or double the amount fixed in 1696, and a minimum salary of 300 marks (\$83.25), triple the former minimum. Revision of salaries was ordered at the expiration of every twenty-five years.

(2) *As to accommodation*.—Beside a suitable schoolhouse, the heritors were bound to provide a dwelling house with garden attached; in case no garden ground could be obtained a money indemnity was to be paid. In addition to these allowances the masters continued to receive the school fees.

(3) *As to election and qualifications*.—The election of the masters was still left to the heritors and ministers as one body, but no heritor was to be entitled to vote in school matters who was not a proprietor of lands within the parish to the extent of at least £100 (Scots) of valued rent appearing in the land-tax books of the county. In

VI.—ACT OF 1646, PROVIDING FOR A SYSTEM OF EDUCATION.

It was in the midst of the civil war, however (1646), that an act was passed which comprised all the essential features of a system of education, namely: (1) Authorized and authoritative supervision, the machinery or instrumentalities consisting at that time of the clergy; (2) provision of schoolhouses and teachers' salaries, a charge imposed upon the "heritors" or landowners of parishes; (3) the principle of common taxation for school purposes—*i.e.*, an assessment upon each "heritor" in proportion to his valued rent, for one-half of which he might obtain relief from his tenants—a provision not far removed from the policy of a general school tax; (4) the principle of compulsion reaffirmed so far as parents were concerned, and also applied to those upon whom the obligation rested to provide schools, authority being given to county officers to set up a school and impose the tax upon the landowners—*i. e.*, heritors—in the case of their failing to discharge their duty.

VII.—FOUNDING OF THE UNIVERSITY OF EDINBURGH.

During this period the resources of higher education were enriched by the founding of the University of Edinburgh. It was created by

case the heritors failed to elect, the duty devolved upon the commissioners of supply of the county within which the school was located. Schoolmasters-elect were to be examined and approved by the presbyteries, and were required to sign the Confession of Faith and the formula of the Church of Scotland.

(4) *As to discipline.*—Charges of neglect of duty, immoral conduct, or cruel or improper treatment of scholars on the part of the schoolmaster could be brought by the heritors, ministers, and elders before presbyteries. In case the charges were sustained, these bodies had power to censure, suspend, or dismiss the offenders.

B. *As to management and superintendence of schools.*—"Presbyteries are empowered to regulate the hours of teaching, and the length of the annual vacation; and their regulations on these points the schoolmaster is required to observe under pain of censure, suspension, or deprivation."

The course of study was arranged by the ministers and heritors, and included religion.

C. *Respecting additional school provision.*—The act provided that in case of those parishes which consist of districts detached from each other by the sea or arms of the sea, or otherwise, as where a parish consists of two or more islands, of which there are several instances in the Highlands, North Isles, and Hebrides, or where it is otherwise of great extent or population, so that one parochial school can not be of any effectual benefit to the whole inhabitants of such parishes, it shall be competent to the heritors and minister, if they shall see cause, on fixing a salary of 600 marks, or the value of three chalders of oatmeal, to be computed according to the provisions of this act, to divide the same among two or more teachers according to the extent and population of the parish. In consideration of the higher salary to be raised by the heritors of such parishes, they were exempted from the obligation to provide schoolhouses, dwelling houses, and gardens. The schools established under this clause were known as side schools. The act continued the superintendence of schools in the ministers of the established church. But, in reality, although the minister of each parish exercised this function, the real power over the schools was vested in the presbyteries.

D. *Provision for poor children.*—The schoolmasters were allowed to charge fees. Nevertheless, the act of 1803 imposed upon them the obligation to teach gratis such

royal charter granted in 1582, by James VI, to the magistrates of the city, who for a quarter of a century had been working to that purpose. Thus by the circumstances of its origin, this latest of the Scottish universities belonged to the influences which were destined to effect the removal of scholastic institutions from ecclesiastical control.

VIII.—DISASTROUS EFFECTS OF PROLONGED CONTESTS.

The act of 1646, repealed though it was at the restoration, is the distinctive contribution of the period under review to the cause of education. The act, however, could not create schools, nor prevent the disastrous consequences of the conflicts by which the country was torn.

Notwithstanding the multiplication of schools, there are not wanting evidences that incessant warfare and hostile incursions had reduced a large proportion of the people of Scotland to a state of semibarbarism. This alarming condition called for active measures beyond the plane of inert legislation.

THIRD PERIOD, 1696—1847.

The accession of William and Mary supplied the conditions required for practical reforms. The Presbyterian Church was firmly established

poor children as the heritors and ministers might recommend. (Second report of commission, pp. XXVIII, XXX, LXIII.)

(b) *Act of 1835*.—In 1835 the education committee of the general assembly presented a memorial to the Government asking, among other things, for a grant from the public funds toward the establishment of schools in destitute parts of the highlands and islands. These negotiations led to the passing of an act the same year which provided for the payment of salaries to schoolmasters for certain districts in the highlands and islands which had been disunited and formed into parishes *quoad sacra*, on condition that the heritors of such parish or district shall, at their own expense or otherwise, provide suitable school buildings. The schools erected under the provision of this act were known as Parliamentary schools. They were subject to the same condition as parochial schools, the source from which the salary was derived alone excepted. The amount of salary in each case was proportioned to the outlay incurred in providing the buildings. (Second report of commission, p. LXXVII.)

The dearth of school provision in highland regions excited alarm long before the statute of 1803 made special provision for them, but to the Protestant mind this was less deplorable than the fact that there were still strongholds of the Romish Church.

(c) *Voluntary Society*.—The chief of the voluntary societies, i. e., The Society for Propagating Christian Knowledge, had been formed as early as 1701, for work in the Highland regions. It was countenanced and assisted by the general assembly, as well as by private subscriptions, gifts, etc. Its resources gradually increased, and by the end of the period under review it was able to act independently of public aid, having an annual revenue of £5,000 (\$25,000) from its accumulated capital. (Public Education, by Sir James Kay Shuttleworth, p. 351.)

XI—*Sessional schools*.—Session schools were established generally in connection with chapels which had become the centers of new parishes (*quoad sacra*). For their maintenance the Kirk sessions made grants from their ordinary funds arising from church collections, from casual *mortifications* (i. e., gifts and legacies), and other sources; hence the name by which they were designated.

XII—(a) *Causes of the disruption of the church*.—The union of the crowns of England and Scotland (1684) was followed at an interval of eight years by the union of

as a result of the accession, and the union with England stimulated art and commerce and opened new careers to the ambitious youth of Scotland. These circumstances, with the necessity of raising the shiftless and ignorant from their wretched condition, gave an impulse to educational efforts.

IX.—ACT FOR "SETTLING SCHOOLS."

The act of 1646 afforded the required basis for action. Its provisions were revived in an act of 1696, for "settling schools," and the church was empowered to see that the law was effectually carried out. A school in every parish became an accomplished fact throughout the Lowland districts, the presbyteries exercising their authority wherever the heritors failed to act in the matter. To the latter bodies also was intrusted the supervision of schools, which service imparted to them a unity of purposes, similarity of conduct, and equality of results seldom attained in the incipient stages of a system, and never attained by purely local efforts. Security of salary and tenure drew to the schools a body of superior teachers and imparted dignity and influence to the office.

The uncertain division of responsibility between the heritors and presbyteries was a source of friction which soon made itself felt in the operations of the system. This, however, was a matter easily adjusted.

Parliaments (1707). The second measure excited deep opposition in the northern country, particularly on account of the solicitude of the Scotch for the independence of their church. Indeed, the union could not have been accomplished but for an act expressly exempting the church from the interests to be affected.

A few years later (1712) an act restoring lay patronage in respect to church livings was passed and a limited toleration act in favor of Episcopalians. In 1731 the right was formally given to the heritors and elders to "elect and call incumbents to church livings instead of to name and propose the person to the whole congregation, to be approved or disproven," nor was the law submitted to the presbyteries for approval. The abuse of patronage, and more especially the ignoring of the rights of congregations, was the provoking cause of the disruption of the church. The sympathies of teachers were largely involved in the movement.

(b) *Educational activity of the new church.*—In the general assembly which met in October, 1843, six months after the crisis, it was reported "that 80 parochial teachers, 57 teachers of assembly schools, and 27 teachers of schools connected with the Society for Propagating Christian Knowledge had intimated their intention of adhering to the Free Church, besides 196 teachers of privately endowed and adventure schools. It was also ascertained that the teachers, students, and scholars of both the normal schools at Edinburgh and Glasgow had, almost without exception, adhered to the Free Church. The assembly resolved to prosecute the education scheme with energy, and a plan was adopted for raising £50,000 to aid in erecting 500 school-houses, in order that there might be, as far as possible, a school attached to every ministerial charge."—[Education Commission (Scotland), 1st Rep., p. 95.]

Five years later the education committee reported that the amount raised was £39,113 18s. 3d. The committee had erected normal schools in Glasgow and Edinburgh, at a total cost, including the government grants, of £19,099 16s, and they reported the existence of 428 congregational schools and 177 schools either subordinate or subsidiary to the first class, and chiefly situated in the Highlands. Besides these

A serious and, as it proved, irremediable defect in the system was the want of expansive force and flexibility. It could neither grow with increasing demands nor adjust itself to regions differing widely in natural and social conditions. As a system, it utterly failed in the Highlands, and it had no application to the burghs. The church endeavored to make up these deficiencies by supplementary agencies, and at length, after a century of faithful effort, invoked the aid of legislation with the view of fortifying the parish system and giving public support to additional schools.

X.—NEW LEGISLATION.

An act passed in 1803 defined more strictly the respective powers of heritors and presbyteries, improved the salaries of masters, and increased the provision of parish schools in the Highlands by authorizing the erection of "side schools" at the expense of the heritors. The efforts in behalf of the Highlands did not stop here. Mission schools were created, and in 1825 the church developed a general scheme for dealing with these regions. The outcome of this scheme was the establishment (1835) of an additional class of schools called Parliamentary schools, because the salaries of the masters were paid from a public grant. But parish schools, supplemented by side and Parliamentary and mission schools, could not completely meet the needs of the people

a third class of 12 missionary schools existed in destitute localities, but most of them in connection with churches either "in progress or in contemplation." Seven grammar schools had also been established in important towns, and 102 evening schools, "the attendance on which may be regarded as nearly all additional to the attendance during the day." These schools were taught by 659 teachers, "all receiving salaries or gratuities, more or less, upon the scheme."—[Public Education, pp. 361, 362.]

XIII—(a) *Scope of parish schools*.—In his testimony before a committee of the House of Lords in 1845, Dr. Pyper, professor of humanity in St. Andrews University, characterized the parish schools as follows: "The parochial schools of Scotland perform the functions of three classes of schools on the continent. In the first place, they are primary or elementary schools, properly so called; in the second place, they are burgher or commercial schools, where more extended instruction, but generally excluding the ancient languages, may be obtained; and, thirdly, they serve the purpose of grammar schools throughout Scotland."

Mr. Shuttleworth, who quotes this testimony, adds: "Owing to this constitution, the Scotch parochial school has been distinguished by one beautiful feature. Upon its benches the children of every rank in life have met and have contended for honors, earned only by higher natural gifts or superior moral qualities. Those whom the accidents of rank and fortune have not yet separated have here formed friendships which have united the laird and the hind through life by mutual service and protection. Thus sentiment has overleaped the barriers which divide society into classes, to acknowledge the claims of personal feeling and to lift humble merit from obscurity."—[Public Education, p. 335.]

(b) *Curricula of burgh schools*.—What the purposes of "grammar schools" were may best be determined by an examination of their curricula, of which numerous prospectuses are given in the Special-Report on Middle Class Schools in Scotland (1868) and

nor afford scope for the missionary zeal which saw in every neglected haunt of humanity and in every district where Catholicism held sway an outpost of Satan. A number of voluntary societies, inspired by proselyting or philanthropic zeal, entered also upon the educational work.

XI.—BURGH SCHOOLS—PUBLIC AND PAROCHIAL.

The burghs of Scotland, although not included in the operations of the parish system, and having no statute provision for popular education, played an important part in the educational development. Burgh schools, created as we have seen by municipal authority or by private bounty and supported in part by the public funds of the burghs, multiplied during the period under consideration.

The growth of commercial relations created also in the larger towns, a demand for courses of instruction better adapted than the old classical course to the requirements of lads who were destined for business. Discussions similar to those which center to-day in the comparative merits of classical and modern studies were rife. In some burghs, side by side with the classical schools, academies were founded for instruction in modern languages, mathematics, etc., to the exclusion of Latin and Greek; and in others departments were formed in the classical schools designed to meet the new requirements.

The church exercised supervision over these burgh schools and academies, although it had no part in their foundation or support. They drew their pupils mostly from the middle classes, as was the case

in Grant's History of Burgh Schools, chapter XIII. From the latter is cited the following "*ordo scholarum grammaticæ*," used at the High School of Edinburgh in 1640:

"During the first six months of the first year the scholars shall be taught the principles of grammar in *vernaculo sermone*, learning at the same time the Latin names of everything on earth and in heaven; during the second six months they shall daily repeat a certain portion of grammar and learn particular sentences relating to life and manners; during the first six months of the second year they shall repeat daily certain parts of grammar, more particularly as laid down by Despauter, translating the same into English; also they shall read Cordery's Colloquies; during the second six months they shall be taught daily the syntax of Erasmus, the masters teaching and the scholars learning in the Latin language. Through the whole of the third year they shall repeat daily a portion of etymology and syntax, be exercised in reading Cicero's *de Senectute* and *de Amicitia*, Terence's comedies and elegies, Ovid's *Tristia*, Buchanan's Psalms, and Cicero's epistles, reading the same *clara voce*. In the fourth year they shall repeat daily for the first month what they had already learned, be taught Buchanan's prosody with Despauter's select rules, and Buchanan's epigrams and poetry; during the other months they shall be exercised in poetry and in the practice of the rules of grammar, reading Virgil, Ovid's *Metamorphosis*, Horace, Buchanan's Psalms, translating Cicero, Cæsar, and Terence; the beauties of these authors to be explained to them. In the fifth year they shall study the whole rhetoric of Tully and the greater part of the compendious rhetoric of Cassander; read Cicero's Orations and the short speeches in Sallust, Virgil, and Lucan; they shall read distinctly and audibly, and declaim."—[Grant's History of Burgh Schools, chap. XIII, pp. 339, 340.]

The curriculum sketched for Perth Academy, in 1760, is given by Mr. Grant to illus-

also, in the main, with the sessional schools established by the church in the larger towns. Mission schools, on the contrary, sought the poorer neighborhoods and ministered to the laboring classes. Private schools of various kinds existed, but the larger proportions were wanting in all qualities of good schools.

It is obvious that under the conditions here described there was, both in parishes and burghs, great waste of educational effort. Schools multiplied without special reference to the wants of the population, and without guarantees of efficiency, and with uncertain or fluctuating support.

XII.—DISRUPTION OF THE CHURCH.

While the general conditions of the country operated thus to multiply the educational agencies, a movement took place within the church which was destined to destroy its supreme control of those agencies and eventually to work a radical change in the system of education. Presbyterianism being firmly established and in favor with the government, there naturally grew up within its fold a party more disposed to seek the alliance of worldly power than to consider the wishes of the people. This party gradually gained the ascendancy in the general assembly and began to shape the church policy upon aristocratic lines. This tendency was especially shown in the appointment of ministers. Under the sanction of the act of 1712, reviving lay patronage, the preferences of the landed gentry were consulted rather than

trate the work proposed for "modern schools." It consists of "the higher branches of arithmetic; mathematical, physical, and political geography; logic, and the principles of composition; algebra, including the theory of equations and the differential calculus; geometry, consisting of the first six books of Euclid; plane and spherical trigonometry; mensuration of surfaces and solids; navigation, fortification; analytical geometry and conic sections; natural philosophy, consisting of statics, dynamics, hydrostatics, pneumatics, optics, and astronomy; and subsequently chemistry was added, consisting of heat, light, including spectrum analysis, chemical affinity, laws of combining proportion, atomic theory, nomenclature, and notation, the gases, acids, alkalies, etc. The town council adopted, with some modifications, this programme, voted a large sum of money as salaries, and appointed a rector and master to carry it out."—[Burgh Schools, pp. 118, 119.]

(c) *The training of teachers.*—With respect to the training of teachers, the witnesses examined before the select committee of the House of Lords in 1845 unite in declaring that "the parochial schoolmaster ought to be educated during two years in one of the universities of Scotland and produce certificates of his attainments. They would also require him to attend a normal school, for the purpose of acquiring a knowledge of the principles and best methods of teaching, and for the practice of the art under proper superintendence in some model school. But they appear to be less conscious that, for the teacher of the parochial school, not knowledge or method is alone required, but much peculiar and special knowledge, and that everything which he knows should be molded so as to be most available for the mental training as well as the mere instruction of young scholars. The witnesses consider it essential that the parochial schoolmaster should be able so to instruct his scholars in Latin and Greek and mathematics as to prepare them for the college classes; that

the wishes of congregations. This course was in direct violation of a principle insisted upon by the Reformers and jealously guarded by the people. The agitations excited by this abuse of patronage culminated in 1843 in a disruption of the church. "On one solemn day of assembly," says Shuttleworth, "more than four hundred ministers separated themselves from the communion of the Established Church;" the seceding congregations, which included a large proportion of the best elements of the population, formed the Free Kirk of Scotland. The new Society threw itself into the educational work with great ardor, created its own schools for the children of its fold, and vied with the established church in the maintenance of mission schools in the Highlands and in the growing towns. Wherever its influence was felt it was exercised in favor of congregationalism, which in church affairs is equivalent to the public will in political affairs. The independent stand taken by the Free Church stimulated the rivalry of other denominations. As a result of these activities, the single parochial school system, supplemented by schools otherwise maintained but subject for the most part to the supervision of the presbyteries, gave place to a double system, comprising on the one hand the parish schools controlled by the Established Church, and on the other separate schools in connection with other churches. The change is illustrated by the fact that whereas in 1842, out of an estimated total of 4,407 schools in Scotland, 3,047, or 70 per cent, were examined by presbyteries; in 1850, out of a total of 4,371 schools reported, only 1,872, or 43

he should also be able to teach the practical applications of mathematics to land-surveying, measuring, navigation, etc.; algebra, commercial arithmetic, and book-keeping; English grammar, French, geography, history, the rudiments of agricultural chemistry. They all insist strongly on a full and critical knowledge of the Holy Scriptures and of the Shorter Catechism of the Assembly of the Divines. No mention is made of instruction in music or in art.

* * * * *

"The schoolmasters examined before this committee urge the adoption of a fixed standard of qualification. It is the general practice to require certificates of scholarship and success in teaching. A candidate ought to produce a certificate from the rector of a properly constituted normal school for the purpose of training young men to the practice and knowledge of teaching."—[Public Education, pp. 336-337.]

(d) *Notable bequests.*—Among several bequests of this period the Dick bequest stands out with peculiar prominence, for its amount, application, and administration. Its founder was James Dick, a successful merchant, who died in 1828. In 1833 his bequest amounted to £113,147 4s 7d, which was afterwards increased to £118,787 11s.

According to the terms of Mr. Dick's will the income of the fund was to be applied to the assistance of the county parochial schoolmasters in the three counties of Aberdeen, Banff, and Moray, excluding the royal burghs, but in such a manner as not in any way to relieve the heritors or other persons from their legal obligations in respect to the support of teachers. Dr. S. S. Laurie, who has been the visitor for the trustees since 1856, has given an interesting history of the operations of the fund in his report for 1890.

Among other bequests which became available about the same time as the above

per cent maintained relations with the Established Church. The parish system had been overgrown by auxiliary and rival institutions.

XIII.—HIGH IDEALS OF THE SCHOOLS AND REACTION UPON PUBLIC SPIRIT.

While the constitution of a school system was becoming thus insensibly a matter of experimental discovery to the people, scholastic ideals acquired also a secure place in their thoughts. Here the influence of the burgh schools was paramount. They carried instruction to the level of the universities, or made it the preparation for business, and thus they familiarized the people with higher standards of popular education than can be realized by purely elementary schools. The parish schools, preserving the traditions of their origin and following the lead of the burgh schools, added classical and academic courses to the elementary branches and kept a clear road open to the universities. There were, of course, great differences in their practical work; housing and equipment might be miserable and the teacher incompetent in one parish; in the next the teacher efficient, ably sustained, and capable of inspiring pupils with enthusiasm for knowledge. But with all these differences there was one uniform theory of education. Probably no system of elementary schools ever showed a higher proportion of university graduates among the teachers than the Scottish schools at this period. For this reason it is the more remarkable that the need of professional training for teachers should also have been recognized

was one of £90,000, made by John McNabbe, for the benefit of the poor of the parish. of Dollar and shire of Clackmannan, and one of £20,000 made by Mr. Milne to endow a school in Fochabers.

XIV.—The education committee of the general assembly reported, in 1829, that a considerable portion of those attending at the several schools are of the Roman Catholic Church; and it is proper to state that the schools are always open to scholars of this class as freely and on the same terms as to the Protestants, and that the teachers have been directed not to press on the Roman Catholic children any instruction to which their parents or their priests may object, as interfering with the principles of their own religion. The Roman Catholics resort, accordingly, to the general-assembly schools, in most cases, without jealousy or reluctance, and receive every branch of literary instruction in the same classes with the Protestants, from the same schoolbooks, and without any sort of distinction betwixt the denominations. At the same time the committee have specially directed that the instruction given at the assembly schools, whatever may be the number of the Catholics usually in attendance, shall be accommodated strictly and exclusively to the principles of the Established Church, and the Catholic children are invited to participate, so far as their advisers may think proper to direct them.—[Public Education, pp. 357, 358.]

The committee of the Free Church declare “we do not plant our schools as nurseries of Free Catechism, nor do we ask our teachers to make proselytes to Free Churchism of their pupils. Our schools are really as simple and purely elementary schools for giving a good general education to the young as were the best parish schools before the disruption. Our teachers, like other teachers, teach the Bible and the Shorter Catechism along with the common branches of school instruction. The only peculiarity is that Free Church parents may send their children to our schools

The Established Church began this work in 1841, creating a normal school in Edinburgh and a second in Glasgow; in 1845 the Free Church followed the precedent in both cities.

Educational bequests testified to the enlightened regard for public interests which the general diffusion of knowledge naturally creates. These were for the most part applied to the fostering of secondary education, or to bringing the chances of university training within the reach of poor lads.

XIV.—RELIGIOUS TOLERANCE.

The spirit of religious tolerance displayed in the conduct of clerical schools contrasts strangely with the prevailing intolerance of religious sects. In the schools, alike of the Established and of the Free Church, all sectarian tests for the children of noncommunicants were forbidden. This policy was, however, the natural consequence of the intense desire of each church to extend its influence, coupled with an earnest belief in the moral effects of education. The purpose of the Established Church to keep control of the educational work was further indicated in its opposition to private schools. In this it was heartily seconded by the burghal authorities.

XV.—INFLUENCE OF UNIVERSITIES.

The relations between the universities and elementary schools were maintained by the easy passage from the lower to the higher curriculum, by the general distribution of university-trained teachers, and by the system of bursaries. The importance of the universities was recognized by the appointment of royal commissioners to investigate and report upon their

without any fear of their being drawn away from the Church; and others, to whom the guaranty of a Christian church seems of no value may send their children without any fear of their being drawn away from Christianity."—[Public Education, pp. 364, 365.]

XV.—(a) *University bursaries*.—In 1830 Aberdeen controlled bursary funds yielding an annual income of £2,871, and providing tuition for 240 students; Edinburgh had 80 bursaries, supported by funds yielding annually £1,172; Glasgow 72, supported by an annual income from bursaries of £1,287; St. Andrews 55, on an annual income of £580.—[General report of the commissioners (1831) pp. 316, 349, 113, 236, 394.]

(b) By the act of 1858 the two universities of Aberdeen, *i. e.*, King's College and Marischal College, were united into one university and college. The act "introduced important changes in the constitution and government of all the universities. The ordinary administration of the affairs of each remained vested, as practically it had previously been, in all except Edinburgh, in the hands of the *senatus academicus*, or body consisting of principals and professors.

"The act invested the senate of Edinburgh University with like functions, these having previously been exercised in that university by the magistrates and councils of the city.

* * * * *

"While the ordinary government of each of the universities was vested under the statute in the *senatus academicus*, the acts of the *senatus* were made subject to the

status. Three such inquiries were ordered during this period, viz, in 1826, 1830, and 1837, respectively. They were directed specially to the organization of the universities, but the scheme and conduct of studies were also considered. The outcome of these inquiries was the universities (Scotland) act, 1858. It was during this period, also, that the passion for speculative philosophy developed in the Scotch universities, particularly at Glasgow and Edinburgh. While this movement possibly lessened the influence of the universities in the practical affairs of the country, it gave to Scotland a distinctive part in the intellectual progress of modern Europe.

XVI.—RESULTS AND FAILURE OF THE PARISH SYSTEM.

As to the results of instruction so zealously fostered at this period there is much evidence. Macaulay paid an eloquent tribute to the act, which gave the impulse to the work, in a speech delivered in the House of Commons in 1847, and it has been the common theme of historians of the period. It is obvious, however, that the ideal of a national system which the Reformers had in view when, in 1560, they framed the First Book of Discipline, had not yet been realized. The failure, apparently, was due to the want of some central organization that should embrace and unite all the agencies at work. The constitution of the burgh schools kept alive the notion of civil authority in the school affairs. The democratic spirit of the adherents of the Free Church tended in the same direction; gradually, new conceptions of an educational system developed and began to focus themselves around the Government, which had assumed an active part in the promotion of elementary instruction.

control and review of the university court, a new governing body introduced by the act.”—[Report of the Scottish Universities Commission (1878) pp. 2, 3.]

XVI.—*Effects of the act of 1696.*—“What followed? An improvement such as the world had never seen took place in the moral and intellectual character of the people. Soon, in spite of the rigor of the climate, in spite of the sterility of the earth, Scotland became a country which had no reason to envy the fairest portions of the globe. Wherever the Scotchman went, and there were few parts of the world to which he did not go, he carried his superiority with him. If he was admitted into a public office, he worked his way up to the highest post; if he got employment in a brewery or a factory, he was soon the foreman; if he took a shop, his trade was the best in the street; if he enlisted in the army, he became a color sergeant; if he went to a colony, he was the most thriving planter there. The Scotchman of the seventeenth century had been spoken of in London as we speak of the Esquimaux. The Scotchman of the eighteenth century was an object, not of scorn but of envy. The cry was that wherever he came he got more than his share; that, mixed with Englishmen or mixed with Irishmen, he rose to the top as surely as oil rises to the top of water. And what had produced this great revolution? The Scotch air was still as cold, the Scotch rocks were still as bare as ever. All the natural qualities of the Scotchman were still what they had been when learned and benevolent men advised that he should be flogged like a beast of burden to his daily task. But the state had given him an education. That education was not, it is true, in all respects what it should have been. But such as it was it had done more for the bleak and

FOURTH PERIOD, 1847-1872.

XVII.—GOVERNMENT ACTION.

Spirit manifested towards.—The fourth of the periods under review is marked by the new attitude assumed by the general Government with respect to educational work. Heretofore, the action of the Government had been confined to a small annual grant in aid of schools, accompanied with a slight measure of direction and supervision. In 1847, in consideration of a great increase in the grant (*i. e.*, from £30,000 to £100,000) the directive and supervisory functions of the Government were also greatly extended. The effect in Scotland for a time was to increase rather than to diminish the divergence of educational agents.

By reason of its previous history, however, Scotland was peculiarly well prepared to coöperate with the general Government in the conduct of education, hence the contentions which had raged in England over the creation of the education department (1839), and which were renewed in 1846-47 over the increased scope of its operations, did not extend to the northern kingdom. The chief cause of these contentions, namely, the threatened supremacy of the church, no longer existed here, as the Scotch Church already shared its authority over schools with the civil powers. The problem of religious instruction had also reached a peaceful solution in Scotland. The "Shorter Catechism"

dreary shores of the Forth and the Clyde than the richest of soils and the most genial of climates had done for Capua and Tarentum."—[Macaulay's speeches and poems, Vol. II, pp. 60-61. See also Lecky's History of England in the Eighteenth Century, Vol. II, pp. 45, 48, 49.]

XVII.—(a) *Government grants and developing policy.*—In 1833 a grant of £20,000 (\$100,000) was made by Parliament in aid of education in Great Britain. It was applied solely to building purposes, and was distributed through private societies. The grant was renewed annually, and in 1847 increased to £100,000 (\$500,000). Scotland does not appear to have availed itself of the bounty at first. In 1839 the education department (committee of council on education) was created and charged with the distribution of the fund.

In view of the proposed increase in the appropriation, the department issued minutes (1846-47) providing for increased inspection of aided schools, more definite guaranties of efficiency in the teaching body, improved status of pupil-teachers (apprentices in elementary schools), higher rates of compensation to masters for making the schools more attractive and of greater practical advantages to the poor.

Opposition in England was excited particularly by minutes of the same year providing for the representation of lay subscribers in the management of Church of England schools. This was stoutly opposed as an infringement upon the prerogative of the Church.—[Minutes of Committee of Council on Education, 1846.]

July 10, 1847, directly after the grant of £100,000 had been allowed, the department issued a general letter of instruction to the Government inspectors defining their duties under the new conditions, and giving in detail the requirements which managers must fulfill in order to secure the benefits of the grant for their schools. These requirements pertained to school buildings, houses for the teachers, qualifications of pupil-teachers who might be employed, and the income which must be assured to certificated teachers, in whose behalf alone augmentation of stipend might

was a manual acceptable to all Presbyterians, and no attempt was made in the schools to force it upon others. Under these circumstances, all that Scotland demanded was the preservation of the existing status of the delicate question, a demand which fully accorded with the disposition of the Government.

Effects of.—The new policy went into operation in Scotland in 1848. Its stimulating effects were quickly realized. In thirteen years the enrollment of pupils increased from a ratio of 1 in 13 of the population to 1 in every 6.5.

Inspected schools, with their trained teachers, showed a higher average of results than the uninspected, and the income of inspected schools was substantially increased. For example, in 1848 the average annual income of 1,049 parochial schools, omitting the value of buildings, was about £57. In 1864 the average annual income of inspected schools was £103 17s 7d, of which £33 9s 2d were derived from the parliamentary grants.

But for the fact that the spirit of the Scotch system was radically different from that of the Government or privy council system, as it was called, there would have been little cause for dissatisfaction. Theoretically at least, no distinction had been made in Scotland between the education of the poor and the rich. Elementary education was treated as an integral part of complete education and a means of equalizing the different classes of society; the Government, on the con-

be claimed for the teacher and a salary double the increase sought. Thus, as a condition of the payment by the committee of council of an augmentation of salary amounting to £15, the managers must provide the teacher with a salary of £30, and their lordships required that at least £15 of this salary should be derived from subscriptions, donations, or collections, either local or from a general subscription fund. Further, it was ordered that at least one-half of the local salary should be derived from some other source than school pence.—[Minutes of 1847.]

(b) Estimates based upon the reports of the education committees of the churches give a total of 225,000 pupils for Scotland in 1848. This was very nearly 8 per cent of the population according to the census of 1851 (*i. e.*, 2,870,784).—[Public Education, pp 370, 371.]

The estimates of income (1848) are from the same source (p. 369).

The statistics for 1861 are to be found in the second report of the Education Commission, p. xix, and appendix; summarized tables, pp. 1-3; also Special Statistical Report of the Commission, pp. 1-38.

The report gives, pp. xxxix-xl, the following comparative statistics as to the quality of teaching in 141 schools having certificated teachers and 189 schools whose teachers were without certificates:

	Schools with certificated teachers.	Schools not having certificated teachers.
Very good	7	1
Good	71	40
Fair	47	70
Indifferent	13	41
Bad	3	37

trary, sought only to aid in giving the poorer classes the rudiments of knowledge. The impossibility of harmonizing these two ideals helped to keep alive and to increase the demand for a reorganization of the entire work.

XVIII.—LEGISLATION OF 1861.

The year 1861 marks a distinct step forward in the passage from an ecclesiastical to a civil school system. In that year an act was passed which transferred the examination of schoolmasters from the presbyteries to boards of examiners appointed by the courts of the four universities. For the religious test heretofore required the new act substituted a general declaration by the teacher-elect to the intent that he would not teach or inculcate any opinions opposed in the Shorter Catechism and that he would do nothing prejudicial to the interests of the Established Church. The act provided specifically for the discipline of masters and for their dismissal from the service. It raised the minimum annual salary to £35 and the maximum to £70, and provided for retiring pensions.

The election of masters remained in the hands of the heritors and minister of the parish, and the superintendence of schools in the charge of the presbyteries.

It should be specially noted that the act empowered the heritors to "establish a female teacher," and in such case a yearly salary of £30 might be added to the school assessment, but in no case was the educational assessment to exceed £110.

XIX.—ROYAL COMMISSION TO INQUIRE INTO THE SCOTCH SYSTEM.

In 1864 a commission was appointed to examine into the operations of the Scotch system. The inquiry was exhaustive, covering the actual state of education and the views of representative men as to the measures by which a national, permanent, and efficient system could be secured. The time was fully ripe for such a measure; the current of thought and discussion set irresistibly toward that consummation.

The years that intervened between the publication of the report of the commission and the passage of the Scotch education act were occupied in the elaboration of a plan which should conserve and unify the forces already enlisted, supply the expansive power which had been wanting in the parish system, and above all carry the popular sympathies, as that system had done in the Lowlands.

XX.—INFLUENCE OF THE SCOTCH SYSTEM UPON MOVEMENT IN ENGLAND.

We should not fail to note that the events of this period were part and parcel of a general movement to rid the British Government from

XVIII.—For a detailed view of the provision of the act of 1861, see second report of the Commission, pp. xxviii-xxx, xxxii, xxxiii.

the stigma of indifference to the intellectual degradation of the people. The agitation of the subject in England began with the nineteenth century, and from its beginning the parochial-school law of Scotland was cited as an example and a reproach to England. Before all the committees and commissions appointed to inquire into the existing state of popular education in England, from Lord Brougham's select committee of 1818 to the Duke of Newcastle's commission, 1858, the system which had taken root in Scotland was the subject of close inquiry. Its indigenous origin, its priority in time over other systems of Europe, its vital force, its scholarly spirit, and its inherent limitations became matters of familiar and suggestive knowledge to those who were working for the development of a system in England.

Lord Brougham went so far as to advocate the parish system, which had worked so well in Scotland, for the country districts of England.

The fourth and last of the historic periods here reviewed completes the series of events leading naturally to an organized system of popular education adapted to the spirit of the Scotch people and to the conditions of modern society. To the final result each of the periods considered made a distinctive contribution which succeeding periods conserved and expanded. From the first were derived institutions, policies of control, and the sense of civic obligation; from the second, the essential principles, the framework and informing purposes of an educational system; from the third, a century and a half of practical experience in the conduct of a tentative system; from the fourth, the agency for consolidating and harmonizing forces that hitherto worked without organic union. The present system is not a modern creation, but is deeply rooted in the national history; herein is the cause at once of its stability and its progressive spirit.

SOURCES OF INFORMATION CONSULTED IN PREPARING THE OUTLINE OF THE PRESENT SYSTEM OF EDUCATION IN SCOTLAND.

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Report of the Edinburgh school board, 1888-91.

Report of the Glasgow school board, 1888-91.

Report of commissioners on endowed institutions in Scotland, 1880, 1881.

Schemes submitted by commission appointed under the educational endowments act, 1882.

Report of the royal commissioners on the universities of Scotland, 1878.

Statesman's Year-book, 1889 and 1891.

Elementary education acts, 1872, 1878, 1883.

Educational endowments act, 1882.

Technical schools (Scotland) act, 1887.

Universities acts, 1858, 1889.

Calendar Edinburgh University, 1890-91.

Calendar Glasgow University, 1891-92.

Calendar St. Andrews University, 1891-92.

XX.—In respect to Lord Brougham's attitude see Elementary School Contest, by Francis Adams, p. 71.

Calendar Aberdeen University, 1889-90.

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Calendar of the University of Edinburgh, 1891-92.

CHAPTER VI.

EDUCATIONAL SYSTEM OF ENGLAND AND OPERATIONS FOR 1889-90.¹

General characteristics.—Union of public and private agencies; social distinctions reflected in educational systems; independence of higher schools and colleges; elementary system—(1) Central control; agents and functions.—(2) Local control; elected boards; private managers, powers of; population under school boards.—(3) Statistics of elementary schools; enrollment and average attendance; income, sources of; expenditures.—(4) Teachers, classification, qualification and number; relative proportion of men and women, and increase since 1869; appointment, tenure of office, salaries, and pensions; training colleges (residential and day); registration of teachers; training of pupil teachers.—(5) Organization and conduct of elementary schools; classes of schools sharing in grant and distribution of pupils; effect of government requirements as to studies; results of examinations 1889-90; requirements as to buildings and staff.—(6) School attendance; requirements as to basis of grant; compulsory laws; need of additional measures; attendance upon evening schools.—(7) Special classes; provision for the blind and deaf-mute, for truant or vagrant children; report of industrial and reformatory schools; auxiliary agencies; recent departures; university extension; remission of school fees; provision for technical education; operations of the science and art department.

STRUCTURE OF THE EDUCATIONAL SYSTEM OF ENGLAND AND OPERATIONS FOR 1889-90.

The Report of the Commissioner of Education for 1888-89 contained a detailed account of the educational system of England. The main features of the system are here repeated, with statistics of a later date.

This country affords a striking example of the union of public and private, national and local agencies in a system of public elementary education. The education of the upper and the upper middle classes is provided for in schools, colleges, and universities, which are entirely distinct from the elementary system. These have little or no support from public funds and are not under public supervision. The distinction of social classes is so positive that, in determining the amount of elementary school accommodation to be provided, a deduction of one-seventh of the total of children 1 to 13 years inclusive is made for the children of the middle and upper classes who are not to be included in the provision.²

¹ Prepared by A. Tolman Smith, specialist in British and French school systems.

² Education Acts Manual, by Sir Hugh Owen, 17th ed., p. 69; also annual report of the education department under the head of "school supply." Unless otherwise stated, the outline of the educational system embodied in this article is based upon the education acts as set forth in the manual referred to. The statistics for 1889-90 are from the report of the education department covering that year.

According to the Statesman's Yearbook for 1892, the universities and colleges of England and Wales had an attendance of 13,903 students, exclusive of 1,755 evening students and 3,559 students in technical classes, and employed a force of 812 professors. There were also four university colleges for women with 342 students. The budget for 1889-90 includes £15,000 (\$75,000) for provincial colleges. The same authority states that no complete trustworthy statistics of middle-class or secondary education are available. In addition to the provision for general education, there are many agencies for technical education. These operate chiefly in the metropolis and the great manufacturing centers.

ELEMENTARY SYSTEM.

Central control.—The organization of the system of elementary education dates from the passage of the education act of 1870.¹ The Government, which had been fostering education by grants since 1833, at that time assumed the responsibility of insuring the efficient elementary instruction of all children. The committee of council on education, which had been created in 1839, became the central agency through which the Government was to effect its purpose. This committee, termed also the education department, consists of lords of the privy council. The lord president of the council is the head of the education department, assisted by a member of the council who is called the vice-president of the committee on education. The present head of the department is Viscount Cranbrook; the vice-president is Sir W. Hart Dyke. As these officials change with the change of political parties, the secretary becomes the chief permanent official in the department. The present incumbent of this position is Mr. G. W. Kekewich.

The central department is empowered to require returns as to school accommodations in any and all school districts; to order the election of school boards; to form school boards upon the failure of ratepayers to elect; sanction loans to school boards for the construction of school buildings; approve by-laws as to compulsory attendance, and scale of fees in board schools; receive the reports of Her Majesty's inspectors, and distribute the annual grant. The department prepares an annual code (*i. e.*, manual of rules and regulations) determining the conditions for participating in the grant, which is submitted to Parliament for approval, presents an annual report upon the operations of the system, and makes the annual estimates of appropriations required for the work.

For the purposes of the Government inspection the country is divided into ten divisions, each under a chief inspector; under these there are

¹Subsequent acts have modified and extended the act of 1870; the chief of these are the acts of 1873, 1876, 1879, 1880, 1891.

107 inspectors, 45 sub-inspectors, and 152 assistants. There are also two chief inspectors for training colleges.¹

The annual inspection and examination of the schools conducted by these officials pertain exclusively to the conditions upon which the grant is given. These relate to the buildings, teaching staff, duration of the school year, and a specific amount of scholastic work, including only secular branches.

Local control.—Beyond the two responsibilities assumed by Government—*i. e.*, securing the efficient instruction of all children in the elements of knowledge and an economic expenditure of the Government grant—the largest liberty is left to local authorities. These authorities are of two kinds, school boards and the managers of private (*i. e.*, voluntary) schools. The boards are elected by the ratepayers of school districts for a period of three years. Within the limits imposed by the education acts their authority is absolute. They may claim and levy rates (*i. e.* local taxes) for the support of elementary schools, make compulsory by-laws, and raise loans for building purposes (subject to the approval of the department), engage teachers, fix the rates of salary, and determine the general conduct of the schools in their respective districts.

As constituted by the act of 1870, the school districts are the metropolis, every borough, and every parish (*i. e.*, place in which a separate poor rate is or may be made) not included in the foregoing.

In 1890 there were in England and Wales 2,287 school boards comprising a population of 15,500,279, or 57 per cent of the total population (census 1891). The populations under the respective boards vary greatly; of the whole number 5 per cent have less than 250 inhabitants; 18.2 per cent, between 250 and 500; 44 per cent, between 500 and 2,000; 16.6 per cent, between 2,000 and 5,000; 16.2 per cent, above 5,000.

The additional population under school-attendance committees in districts not having school boards was 9,394,160, which with the population under school boards makes up 89 per cent of the total population.

The managers of voluntary schools (which are mostly parochial) have the same liberty as the boards. In respect to religious instruction both classes of local authorities are bound by the "conscience clause"² of the education act, which forbids any religious test to be applied to children and allows any child to be withdrawn from religious exercise whose parents or guardians so desire. Board schools moreover are strictly prohibited from giving instruction in any religious catechism or religious formulary which is distinctive of any particular denomination.³

Public elementary schools.—According to the nature of their local control public elementary schools, *i. e.*, schools recognized as efficient by the

¹ J. G. Fitch, esq., fills this position in regard to training colleges for women.

² Section 7, act of 1870.

³ Section 14, act of 1870.

department and admitted to share in the public grant, are classified as board and voluntary.

The following table shows the distribution of the educational work for the year ending September 1, 1890, in the two classes of schools.

Statistics of elementary schools, England and Wales, 1889-90.

Classification of schools.	Number of schools.	Accommodations.	Registered pupils, <i>i. e.</i> , enrollment.	Percentage of total enrollment.	Average attendance.	
					Number.	Percentage of enrollment.
Voluntary schools:						
Church of England	11, 922	2, 654, 954	2, 171, 120	45	1, 682, 167	77. 47
Wesleyan	551	215, 180	174, 959	3. 62	131, 934	75. 40
Roman Catholic	946	344, 214	256, 594	5. 32	193, 838	75. 54
British undenominational and other schools	1, 365	416, 872	330, 540	6. 85	255, 496	77. 29
Total voluntary	14, 784	3, 631, 220	2, 933, 213	60. 79	2, 263, 435	77. 16
Board schools	4, 714	1, 935, 287	1, 892, 347	39. 21	1, 468, 892	77. 62
Grand total	19, 498	5, 566, 507	4, 825, 560	.....	3, 732, 327	77. 30

As compared with the previous year, there is an increase of 98,844 (or 1.82 per cent) in school places, 48,314 (or 1.02 per cent) in enrollment, and of 35,292 (0.96 per cent) in average attendance. The estimated increase of population during the year is 1.35 per cent. The total enrollment (*viz.* 4,825,560) is equivalent to 16.6 per cent of the total population. There were, in addition, 43,347 pupils in average attendance upon night schools.

Sources of support.—The public funds for the maintenance of these schools are local taxes (rates), which can be applied to board schools only, and the Government grant. The private funds consist of school fees, endowments, subscriptions, and benefactions. The following tables show the financial status of the schools for the year 1889-90:

Total income for support of schools and proportion from each contributing source, 1889-90.

Classification of schools.	Total income for support.	Percentage from—						Rate per scholar in average attendance.
		Endowment.	School board rates.	Voluntary contributions.	School pence. ^a	Government grant.	Other sources.	
Schools connected with National Society or Church of England.....	\$15, 579, 569	4. 43	.....	18. 92	25. 9	46. 71	4. 04	\$9. 20
Wesleyan schools.....	1, 224, 851	. 22	.....	7. 04	43. 2	48. 10	1. 44	9. 31
Roman Catholic schools.....	1, 659, 596	. 69	.....	21. 06	27. 78	50	. 47	8. 58
British undenominational and other schools	2, 543, 946	3. 76	.....	15. 67	34. 46	44. 86	1. 25	9. 80
Total	21, 007, 962	3. 81	.....	18. 03	30. 23	46. 81	1. 12	.....
School-board schools.....	16, 869, 229	. 21	39. 14	. 03	19. 78	39. 19	1. 65	11. 50
Grand total	37, 877, 191	2. 16	17. 30	10. 01	25. 61	43. 42	1. 50	10. 13

^a As this matter goes to press, information is received of the passage of the act of 1891. Under this act a sufficient sum of money will be annually appropriated to enable managers to remit the tuition fees (school pence) for all children over 3 and under 15 years of age, provided the average rate of fees is not above 10s. per unit of average attendance. When the average rate exceeds 10s. schools having the benefit of the new grant may still charge a fee equal to the excess of the fee above the rate of the grant. This act goes into effect September 1, 1891.

Current expenditures 1888-89.

Classification of schools.	Total.	Rate per scholar in average attendance.
Schools connected with National Society or Church of England.....	\$15,545,091	\$9.21
Wesleyan schools.....	1,228,987	9.33
Roman Catholic schools.....	1,672,401	8.63
British undenominational and other schools.....	2,538,241	9.81
Total.....	20,984,720	.....
School-board schools.....	16,850,096	11.48
Grand total.....	37,834,816	10.12

All the sources of income show some increase over the preceding year, the total increase being 6.19 per cent. The increase in the current expenditure is only 3.58 per cent. Of the total expenditure 72.19 per cent was for salaries, 11.44 per cent for books and apparatus, and 16.37 miscellaneous. It was equivalent to \$1.30 per capita of population, \$7.84 of enrollment, and \$10.13 of average attendance.

TEACHERS.

Classification, qualifications, and number.—Teachers of elementary schools are classified as (a) candidates on probation; (b) pupil teachers; (c) assistant teachers; (d) provisionally certificated teachers; (e) certificated teachers who are either trained or untrained; (f) additional female teachers approved by the inspector; (g) evening-school teachers. Candidates for a certificate must be students in a training college or must have been engaged two years as provisionally certificated teachers, and not under 19 years of age. They must pass two examinations at the interval of a year. This time must be spent in a training college or in the work of teaching.

Lay persons alone are recognized as teachers in day schools.

The number of teachers employed in 1889 was 97,933, of whom 47.5 per cent were certificated, 22 per cent were assistant teachers, and the remainder, 30.5 per cent, pupil teachers.

The increase in the number of women employed as teachers is noticeable. They formed about 70 per cent of the total above given. Considering the several classes for every 100 teachers of each class, 60 certificated teachers, 76 assistant teachers, and 75 pupil teachers were women; the corresponding proportion for 1869 being 48, 60, and 57.

Appointment, tenure of office, salaries, and pensions.—Local managers engage teachers, fix their salaries, and determine their tenure of office. Salaries vary greatly, position and location both affecting the item. In 1890 the average salary for certificated masters was £119 18s. (\$599.50), an increase of 27 per cent since 1870; for certificated mistresses the average was £76 7s. (\$381.75), an increase of 31.8 per cent. Residences were provided for about one-fourth of the certificated teachers.

A small sum is annually voted by Parliament for pensions, donations, or special gratuities to teachers. The number of new pensions awarded in 1889-90 was 103, representing \$12,850, besides 10 gratuities, amounting to \$17,200. The total number of pensions now in force is 753, representing the sum of \$88,050. Teachers appointed since May 9, 1862, do not share in this bounty. The desirability of a general pension provision is widely recognized, and a bill to that effect has been introduced into the House and was strongly supported.

Training of.—Training colleges for teachers, under Government inspection and sharing in the Government grant, are of two classes—residential or boarding, and day colleges. Of the former there are 44, all of which are private (voluntary) schools, and, with a single exception, denominational. About 60 per cent of the masters and 40 per cent of the mistresses of the elementary schools are graduates from these institutions.

The day colleges, which were first recognized by the regulations of 1890, must be attached to a university college or a college of equal rank.

Oxford and Cambridge are already making provision in accordance with the measure.

Course of study for training colleges.—Until the establishment of day training colleges, the course of study for teachers in training was determined by the syllabus of the Government examination for certificates. This syllabus comprises reading, recitation of assigned selections from English literature, penmanship, school management, English grammar, composition and rhetoric, geography, English history, arithmetic, algebra and mensuration, geometry, political economy for men; domestic economy and sewing for women; vocal music and drawing candidates may also be examined in one or two of the following languages: Latin, Greek, French, German, and in branches of sciences prescribed in the syllabus of the science and art department.

Slight differences are made between the examinations for men and those for women. For the latter, mathematics is limited to arithmetic, and but one foreign language is expected, while history is more extended than for men. The course of study is arranged for two years, each leading to an examination conducted by the Government inspector.

The managers of day training colleges are allowed to draw up their own curriculum, subject only to the approval of the department, and students passing successfully any examination for university degrees are to be excused from further examination in the same subjects. This virtually enables the students of day colleges to secure teachers' certificates upon the results of examinations set by their own professors. The managers of the residential colleges were naturally dissatisfied with this discrimination, and their representatives have secured similar privileges for their own students.

The movement to bring university influences to bear upon the training of teachers will, it is thought, accelerate the passage of a registra-

tion act applicable to all classes of teachers. As professional life is regulated in England, this is an important step toward the elevation of teaching to the professional rank. By the contracts apprenticing pupil-teachers, the head teachers under whom they serve are responsible both for their instruction and professional training, and may claim grants for the same. The school boards of the chief cities have established central classes for this special work. Under recent regulations the strain upon the pupil-teachers is greatly relieved, the contracts stipulating for a certain portion of time free from the labor of teaching to be devoted to self-improvement.

Statistics of training colleges.—In 1889-90, the 44 residential colleges were attended by 3,310 students (1,416 men, 1,894 women), and employed 357 officers and teachers, exclusive of the teachers in the practicing schools. The year's expenditure amounted to \$867,438, of which the Government furnished 58 per cent.

ORGANIZATION AND CONDUCT OF SCHOOLS.

As a consequence of the freedom enjoyed by local managers, the schools vary greatly in organization and conduct.

These differences are very clearly shown in the annual reports of the Government inspectors. The conditions laid down by the department, however, for participation in the grant impose a minimum standard in respect to many important features. The schools recognized for grants are infant schools, *i. e.*, for pupils 3 to 7, day schools for older scholars (7 to 14), which may include, also, infant classes, evening schools for pupils 14 to 21 (persons under 14, exempted from the legal obligation to attend day schools, may be admitted).

In 1889-90, of the whole number of pupils enrolled in day schools 33.8 per cent were in infant schools and classes. Of these a little more than half were in schools under certificated teachers of their own.

The organization of schools for pupils 7 to 14, enrolling two-thirds of the pupils, is determined very largely by the scheme of study issued by the department. This comprises obligatory and optional branches. The former, which consist simply of reading, writing, and arithmetic, are arranged in seven grades (standards), each supposed to represent a year's work. The regulations (code) for 1890 allow much freedom of classification, so that a pupil may be in one standard in one subject and in a second standard in another, provided, always, that he shall not be advanced a standard in any subject until he has passed examination in that subject in the lower standard.

The optional subjects are divided into class and specific; the former include grammar, geography, elementary science, and history, of which subjects no more than two can be taken by the same class at one time. The specific subjects comprise what would be considered in this coun-

try high-school branches,¹ and can only be taken by pupils who have passed standard iv. No pupil being allowed to pursue more than two such subjects at one time.

The scheme of study affects the grading of the schools, the teaching staff, both in respect to numbers and quality, and the material equipment.

In infant schools and classes the grant is now allowed wholly on the basis of average attendance. Under the regulations for 1890, collective examination has also been substituted for individual examination in obligatory subjects in schools for older children. This change, like the freedom of classification, favors more rational methods of instruction, and removes the chief inducement to cram.

Work of the schools as shown by the examinations of 1889-90.—The official report shows that in 1889-90 the number of children presented in schools above the infant grade for the Government examination was 2,596,100, or 82 per cent of their enrollment. Of these, 1,409,572 being over 10 years of age ought to have been presented in standards iv-vii, but only 969,441 were so presented, while 440,131 (or 31 per cent) of the number above 10 years of age were presented in standards suited for children of 7, 8, and 9 years of age.

There has been, however, a gradual improvement in this respect, which is due partly to the more regular attendance and increased proficiency of the children between 5 and 10 years of age, partly to the greater attention paid by teachers to the progress of individual scholars.

Class subjects.—The grant for class subjects was claimed by 20,304 (90.18 per cent) schools for older scholars, and allowed in 19,691 schools on account of an average attendance of 2,492,918. "In 2,212 schools (9.82 per cent), with an average attendance of 100,836, no class subject was taken. That these schools are generally the smallest is shown by the average 'number for payment' in each of them, viz, 46, while the same average for each school in which the grant was paid was 127, and in which it was refused, 64."

* * * * *

"The wider range of class subjects allowed recently under the head of 'elementary science' does not appear to be taken advantage of to any great extent at present. The returns show but 32 schools which have taken subjects under this head, while geography has been taken in 12,367 schools, needlework by the girls in 7,758, and history in 414."

Specific subjects.—The number of scholars presented under this head was 78,611, or 15.88 per cent of the number eligible. Of these, 28,712 were from the London school-board district. Of the number presented, 46,871 passed in one subject and 12,012 in two (72.08 per cent of the presentations). Algebra appears to be the favorite subject, claiming 37 per cent of all the passes; 25 per cent were in animal physiology and 28 per cent in domestic economy. The additional subjects for which special grants are allowed are drawing, and for girls, cookery. The grant for the latter was earned by 66,820 girls, an increase of 16 per cent over the previous year.

In addition to the indirect effect of the required curriculum upon the equipment of schools, the department calls in every case for suitable buildings, well lighted, heated, drained, and ventilated, and fixes a minimum for the teaching staff. The principal teacher must be cer-

¹ The specific subjects are Algebra, Euclid, Mensuration, Mechanics, Latin, French or German, Animal Physiology, Botany, Principles of Agriculture, Chemistry, Sound, Light, and Heat, Magnetism and Electricity, Domestic Economy (girls), Shorthand.

tificated (if the average attendance is not over 60 a provisionally certificated teacher is allowed). When the average attendance exceeds 60 an additional teacher must be employed. The department considers each additional certificated teacher to be sufficient for an average attendance of 70, each assistant teacher for an average attendance of 50, each pupil-teacher for an average attendance of 30, each candidate for a pupil-teachership on probation for an average attendance of 20.

School attendance.—Every day school sharing in the grant must meet at least 400 times during the year, and the registers must be marked at every meeting (*i. e.*, half-day session). Presence for an hour and a half without break constitutes an attendance in infant classes, and for half-timers in day schools for older scholars. Full attendance in the latter includes two consecutive hours. The average attendance is found by dividing the total number of attendances during the period considered by the number of times the school has met during the period. As a rule, no attendance is recognized in a day school for any child under 3 years of age, nor for anyone who has passed in the obligatory subjects, standard VII, and is upward of 14 years of age. Under the regulations of 1890 all grants to day schools,¹ excepting those for specific subjects, for cookery, laundry work, and pupil-teachers, and special grants to rural schools, are made at fixed rates per capita of this average attendance.

This allotment of the grant on the basis of average attendance was not only intended to give greater freedom to the scholastic work, but to stimulate efforts for improving attendance. An act passed in 1880, requiring that by-laws should be made with respect to compulsory attendance, was directed to the same purpose, and has had a good effect upon the attendance of children between 5 and 10 years of age. Two conditions operate against a high rate of school attendance, namely, the reluctance of magistrates to convict parents under the

¹ The details of the allotment of the grant are the same under the code issued for 1891 as under that for 1890, particulars of which were given in the Commissioner's Report for 1888-89, pp. 101-113.

Prior to 1890 the grant comprised four divisions in "schools for older scholars," as follows:

- (1) A fixed grant of 4*s.* to 6*s.* per pupil.
- (2) A merit grant varying from 1*s.* to 3*s.* per pupil, according to the inspector's report.
- (3) A grant for the three elementary subjects of instruction, according to the number of pupils passing a satisfactory examination in each.
- (4) Various grants in class and specific subjects.

The code of 1890 raised No. 1 from 4*s.*-6*s.* to 12½*s.*-14*s.*, made No. 2 a definite grant of 1*s.* to 1½*s.* for good discipline and organization, and abolished No. 3. Omitting all special grants, the summary shows "for *infant schools* a fixed minimum grant of 9*s.* and a possible maximum grant of 17*s.* per capita of average attendance; for *schools for older scholars* a fixed minimum grant of 13*s.* 6*d.*, and a possible maximum grant of 17*s.* per capita of average attendance."

compulsory laws, and the low standard allowed for exemption. By the code of 1876 the department made the standard for exemption the fourth, which ought to be passed at 10 years of age,¹ and actually is passed by two-thirds of the children at that age or earlier. About one-third of this number disappear at once from the schools, while only about one in eight reaches the seventh or highest standard. School boards may enact by-laws fixing a higher, or, with the sanction of the department, a lower standard of exemption than that named. Recent statistics give the following information respecting the action taken in this important matter:

Number of local authorities which have made the fourth the standard of exemption, 9,372, representing about 32 per cent of the population;² 68 localities have no by-laws on the subject; 7 employ no compulsion after the third standard; city boards, as a rule, make the fifth or sixth the standard of exemption.

With an average attendance of only 77 per cent of enrollment, the problem is not regarded as settled. A special cause of anxiety is found in the fact that the irregular attendance is confined to a certain class, and with them is chronic.

The remedies proposed by the progressive schoolmen are a system of board schools for the entire county and a uniform compulsory law. All parties are agreed as to the necessity of making school life interesting to the pupils and fruitful of such results as parents can appreciate.

¹ In the Commissioner's Report for 1888-89 it was stated that the code of 1890 fixed the sixth standard and 12 years of age for exemption (p. 101). This, as was subsequently discovered, was a mistake.

² To pass the fourth standard the pupil must be able to read a passage from a reading-book or history of England; to write eight lines of poetry or prose, slowly read once and then dictated, and show copybook; to work examples—compound money and reduction of common weights and measures. Besides this obligatory work he will learn more or less of one or two class subjects. Under the education act of 1876 it is unlawful to employ a child who is less than 10 years of age, or who, being 10 years of age and upward, has not obtained the required certificate of exemption.

Under the factory act a child can not work full time before he is 13 years of age; under the mines act 12 years is the age for full-time work.

"The Prevention of Cruelty to and Protection of Children Act," which received the royal assent on the 26th of August, 1889, imposed further restrictions on the employment of children between a certain hour at night and a certain hour in the morning. It, moreover, enacted that in the case of any entertainment or series of entertainments to take place in licensed premises, or in any circus or other place of public amusement where it is shown to the satisfaction of a petty sessional court "that proper provision has been made to secure the health and kind treatment of any children proposed to be employed," the court is authorized to grant a license for the employment of a child over 7 years of age for such time and during such hours of the day, and subject to such restrictions and conditions, as it may think fit; but that nothing in these provisions shall affect the provisions of the elementary education act of 1876. The new act further authorized the home secretary to assign a factory inspector the duty of seeing whether the restrictions and conditions of the licenses above referred to were complied with, with power to enter and inspect the place of employment.

Evening schools.—The attendance upon evening schools has been steadily declining since the early years of the operations of the education act. In 1890 it was 43,347 as against 77,918 in 1870. This decline is due in part, at least, to the diffusion of elementary instruction. It is, however, generally recognized that the evening schools are not meeting the demands which exist, and their improvement is one of the matters exciting discussion.

Special classes.—The bill making provision for the education of the blind and deaf-mute is still pending, meanwhile they are admitted under specified conditions to board schools. Provision for vagrant or truant children is made in reformatory and industrial schools, established under an act of 1866, or day industrial schools, established by school boards, under the education act of 1876.

The report of the inspector of reformatory and industrial schools (Lieut. Col. Inglis), for 1890, shows the total number of schools under inspection to be 225, viz: 55 reformatory schools, 141 industrial schools, 10 truant schools, and 19 day industrial schools; of these 3 are reformatory and 8 are industrial schoolships. This shows an increase of 2 industrial schools and 1 day industrial school, and a decrease of 1 reformatory school in the year. All the truant schools and all the day industrial schools, with the exception of 1 in Liverpool and 3 in Glasgow, are under the management of school boards. The total number of juveniles under sentence of detention in reformatory and industrial schools at the close of 1890 was 28,589, viz: 23,509 boys and 5,080 girls, this being an increase of 504 boys and 8 girls as compared with the previous year. There were also at the end of the year 3,698 children attending day industrial schools.

Auxiliary agencies.—England is particularly characterized by the number and variety of associations for the promotion of elementary education. There is also a noticeable tendency on the part of teachers and officials to form societies for conference and mutual benefit. The National Union of Elementary Teachers is one of the largest organizations of the kind in the world, numbering above 16,000 members. This association has been active in the support of measures for improving the condition of teachers, and especially for freeing their work from unnatural restraints.

Recent departures.—The most important educational movements now going on in England are the university extension movement, which has been very fully reported in the United States; the movement for the remission of school fees, a measure of great interest to all English-speaking people on account of its relation to the policy of private *versus* public control of public funds; and the provision made for the increase of technical instruction. In accordance with the technical-education act of 1889, local authorities may levy a penny rate to be applied to technical education. The movement to this end has been accelerated the present year (1890) by the local-taxation (customs and excise) act. By this act a large sum of money (£700,000= \$3,500,000) has been placed at the disposal of the county councils of England and Wales with the privilege of applying the same to technical education.

Under the spur of this provision agencies are being organized all over the country for the promotion of this work. In many cases these funds will be applied to schools and classes already in operation and fostered by annual grants from the public treasury. The distribution of these grants is committed to the science and art department, which, like the education department, is under the general control of the committee of council on education.

Operations of the science and art department.—This department, which includes the whole of Great Britain, now expends £500,000 (\$2,500,000) annually, which is applied in the following manner:

(a) Grants for children of the industrial classes, who take science or drawing at school and pass the science and art examinations.

(b) Grants to students who have passed the stage of elementary instruction, and who study in special science and art schools under inspection by the department.

(c) Grants of scholarships and prizes to enable promising students to proceed with their studies.

(d) Grants for apparatus, laboratories, museums, etc.

(e) Maintenance at London of training schools for teachers, *i. e.*, the Normal School of Science and the National Art Training School.

In 1890 the number of students pursuing science subjects in schools, with a view to the examinations of the department, was 108,857, and the same year the number of persons who received instruction in art in some form through the agency of the department was 1,023,950.

The increase in this work during the last twenty years is as striking as that in the elementary school work.

Since 1872 the science pupils under the department have increased by 196 per cent; art students by 250 per cent since 1879, as against an increase of 222 per cent in the average attendance upon elementary schools since 1870. The Government expenditure through the science and art department rose from £184,796 (\$923,980) in 1870-71 to £473,102 (\$2,365,510) in 1890-91.¹

As regards elementary education the material does not permit the comparison as to funds to be carried farther back than 1877-78.

In that year the grants allowed amounted to £1,316,863 as against £3,263,342 in 1890, or an increase of 148 per cent in twelve years. In the former year the grant was equivalent to 13s. 3¼d. per scholar in average attendance, and in the latter to 17s. 10¾d. The gain per capita (35.6 per cent) is evidence of improvement in results.

¹ Reports of Department of Science and Art for 1890 and 1870-71.

CHAPTER VII.

EDUCATIONAL SYSTEM OF FRANCE AND OPERATIONS FOR 1888-89.¹

Central administration: The chief and subordinate officers; the superior council—Local administration: The académies; departments; municipalities and communes as districts of educational administration; academic inspectors and primary inspectors; local committees—Scholastic institutions: Facultés; classical schools (lycées, collèges communaux); primary schools; special state schools; private schools; statistics for 1888-89, 1889-90; teachers and professors; qualification, classification, discipline, and salaries of teachers of primary schools; qualification and salaries of professors of secondary and superior instruction; public provision for the training of teachers—Subjects and courses of instruction: Primary schools; normal schools; lycées and facultés; significance of degrees—Organization and conduct of institutions: Similarity in respect to general features, specialization in particulars; characteristic features of primary schools, classes of schools, authorities establishing, extent of obligation, gradation in elementary primaries, compulsory attendance, secular character, enforcement of the law prohibiting the employment of church teachers—Secondary and superior establishments: How founded and maintained; gradual transformation of facultés—Correlation of studies—Provision for the higher education of women—Special schools—Auxiliary agencies.

EDUCATIONAL SYSTEM OF FRANCE AND OPERATIONS FOR 1888-89.

Central control and supervision.—Education forms in France a department of public affairs under a cabinet officer—the minister of public instruction and fine arts. He is the chief of a highly centralized, thoroughly organized system, exercising his authority through a vast body of officials belonging to the central administration or to local divisions. (M. Léon Bourgeois assumed the portfolio March 17, 1890.)

The chief officers of the central administration, after the minister, are the directors, one at the head of each section of the ministry, *i. e.*, secretaryship and accounts, primary instruction, secondary instruction, superior instruction, and the section of fine arts. These directors are chosen with reference to their special aptitudes for the duties involved. M. F. Buisson is the present director of primary instruction, M. Louis Liard of superior, both well known in this country. M. Rabier is the director of the secondary department. The director of the section of fine arts, M. Gustave Larroumet, has the oversight of public buildings, preservation of monuments, etc.²

¹ Prepared by A. Tolman Smith, specialist in British and French school systems.

² For full directory see *Annuaire de l'instruction publique*.

The councils.—The danger of the exercise of arbitrary authority is obviated by the constitution of elective councils, exercising deliberative, advisory, and judicial functions. The chief of these is the superior council. This comprises sixty members, one-fourth of whom are appointed by the president of the republic and the remainder chosen by their peers from the three orders of instruction. The laws and decrees by which the operations of the system are controlled are not arbitrary dicta, but the final expression of the matured advice of this body.

The matters submitted for consideration are discussed in the permanent section, which meets every week, and finally brought before the entire body, which holds two annual sessions, one in July, the other in December.¹

The minister is represented throughout the country by a staff of general inspectors (ten for secondary instruction, nine for primary, and several assigned to special service). There are also four general inspectresses of infant schools (*écoles maternelles*).

Local administration.—The Imperial University, created by Napoleon in 1806 and invested with the complete control of education, was divided into *académies*. These divisions (seventeen in number, including one in Algiers) are still retained. Each *académie* is presided over by a rector appointed by the President of the Republic upon the nomination of the minister of public instruction. In these *académies* are repeated the main features of the central administration, the rector being assisted by an academic council and having under him a staff of academic inspectors (appointed by the minister) for the service of secondary and primary instruction. The rector is the official head of all the scholastic institutions of his *académie*. The departments which are civil divisions of France (ninety in number, including three in Algiers) are treated for educational purposes as subdivisions of the *académies*. The prefect or executive chief of the department is assisted by a departmental council in the administration of school affairs.

Finally municipalities and communes are districts of educational administration. Here the primary schools are brought into touch with the people themselves, whose direct representatives share with state officials the duties of inspection. The mayors of communes, cantonal delegates, and members of the departmental councils appointed for the service have, by a decree of January 18, 1887, supervision with respect to hygienic and moral conditions. They need no certificate of aptitude for these services, which they render without pay. The officers of the state, on the contrary, are salaried and provided with certificates of qualification. They exercise supervision over the scholastic work of the schools. Although the academic rector has general supervision over all schools of the *académie*, other duties prevent his coming into vital

¹ For full account of the superior council see article by M. Jalliffier, *Monographies Pédagogiques*, Tome 1, pp. 494-547; also *Statistique de l'enseignement supérieur*, 1876, 1878-88.

relation with the primary schools. The academic inspectors (one for each department) have the actual direction of primary instruction. They name the candidates from whom the prefects of departments may appoint full teachers; have the sole appointment of probationers and a large measure of control over all teachers. They must approve the timetables of individual schools, preside over conferences of teachers and receive the reports of the primary inspectors of their respective departments.

The primary inspectors come into the most intimate relations with individual schools. By the law of March 15, 1880, from which this service dates, there should be one primary inspector for each of the 362 *arrondissements*, but the multiplication of schools made this number much too small for the demand, and by the law of October 30, 1886, the minister was authorized to determine the number of these officials in each department. They have reached a total of 450, which gives a mean of 150 schools for each, whereas the ideal is 100 schools. These inspectors are selected upon the results of a special examination. They receive a salary of \$560, \$640, or \$720, according to their location, and \$2 a day for traveling expenses when in circuit. Their oversight extends to the infant schools, also, although these are the special care of a general delegate appointed by the minister, departmental delegates appointed by the rectors, and local committees of women, who look particularly after the sanitary and hygienic conditions of the school premises and the moral well-being of the children.

It should be noted that private schools must be open to the inspection of all the officials here mentioned, but their oversight in these is limited to matters of sanitation, hygiene, and morals. They may also prefer complaints of violation of the laws or of the constitution on the part of directors of private schools.¹

Scholastic institutions.—The chief cities of the *académies* are the seats of *facultés*, i.e., groups of professors for liberal and professional education, corresponding to the universities of other countries. There are at present fifty-eight groups (including six schools of equal rank with *facultés*) at twenty centers.² At Paris there are the five *facultés* of law, medicine, theology (Protestant), science, and letters. The other cities have two or more groups. These, with the state classical colleges (*lycées*, 107 in 1891), communal secondary schools (*collèges communaux*, 235), and the public primary schools (67,340, besides 2,655 public infant schools (*écoles maternelles*) make up the series of institutions of which the academic rectors are the local heads.

¹ See L'inspection à ses différents degrés, Bertrand et Boniface, Monographies Pédagogiques, Tome 1.

² The seats of the *académies* are Aix, Alger, Besançon, Bordeaux, Caen, Chambéry, Clermont, Dijon, Grenoble, Lille, Lyons, Montpellier, Nancy, Paris, Poitiers, Rennes, and Toulouse. There are also *facultés* at Marseilles and Montauban, and at Nantes, a full-course school of medicine and pharmacy.

The scholastic provision is completed by special state schools for the higher order of general or technical education. These are either under the exclusive control of the minister of public instruction or the dual control of this minister and the minister of war, of commerce, etc., according to their nature. Corresponding to the state *facultés* and schools are private institutions formerly called free (*libre*), because they are free from state assistance and from the obligation to follow state programmes. Since, however, they are under the general supervision of the minister, and must have his sanction for their foundation, they pertain in a certain sense to his province.

The enrollment in these several classes of institutions at the latest date of report was as follows:

Primary schools, ages 6-13 (1888-'89): Public; pupils, 4,450,351 (boys 2,462,671, girls 1,987,680); teachers, 100,913. Private; pupils, 1,176,550 (boys 373,721, girls 802,829); teachers, 41,747, or a total enrollment of 5,626,901 pupils as against 5,616,510 in 1887-88, and a total of 142,660 teachers as against 138,655 the previous year.¹

In the state *lycées* for boys, ages 8 to 18, the students numbered 35,864 in 1889, and in the *collèges communaux* 48,911, or a total of 84,775. The year following the total had fallen to 84,186. The same year there were in the private *lycées* and seminaries 90,327 students, giving a total of 174,513 in this grade of scholastic work.²

The *lycées* and local colleges for girls in 1890 enrolled 7,043 pupils. On the 15th of January, 1891, there were on the registers of the state *facultés* 20,785 students, and in the private *facultés* 931, giving a total of 21,716³ students pursuing superior courses, not including the special schools.

Judging from the fuller reports of 1887-88, we might add about 2,200 students for the students of secondary courses for girls and those of special schools. The several estimates are near enough in point of time to be united. They give a total of 5,832,962 students, or 15.26 per cent of the legal population,⁴ private seminaries and convent schools for girls not included. Of this total, 78 per cent are in public institutions. The primary schools, *écoles maternelles*, not included enroll 14.72 per cent of the population, while the attendance upon the classical *lycées* and colleges for boys is equivalent to 1 for every 219 inhabitants, and upon superior courses 1 for every 1,760 inhabitants.

Sources of support.—The costs of the public system are met by state, departmental, and communal appropriations with the addition of tuition fees in public *lycées*, colleges, and superior institutions and a small proportion of gifts and legacies.

The state appropriation for 1891 amounted to \$34,674,505, of which 70.88 per cent was for primary instruction. The proposed appropriation for 1892 is \$35,891,125, of which 70.28 per cent is for primary instruction.⁵

¹The statistics of primary schools in this article are from the official report, *Résumé des États de situation de l'enseignement primaire, 1887-88 et 1888-89*. Algiers is here included.

²Rapport fait au nom de la commission du budget chargée d'examiner le projet de loi portant fixation du Budget Général de l'exercice, 1892, par M. Charles Dupuy, pp. 58, 53.

³Report by M. Charles Dupuy, p. 11.

⁴According to the census of 1886 the legal population was 38,218,903.

⁵Report by M. Charles Dupuy.

The current expenditure for primary education in 1888 amounted to \$30,763,541; of this sum \$22,494,741 represented obligatory expenditures, *i. e.*, those required by law, and \$8,268,750 optional expenditures. The obligatory expenditure was borne as follows: State, 69.06 per cent; communes, 26.38 per cent; departments, 4.56 per cent. Of the entire obligatory expenditure 93.42 per cent was for teachers' salaries. The optional expenditure, which was borne almost entirely by the communes, included payments for school furniture, care of premises, purchase of prizes, etc. (75 per cent of total) and supplements to teachers' salaries (22 per cent). The balance went for the support of optional schools. The total expenditure was distributed as follows: State, 50.67 per cent; communes, 46 per cent; departments, 3.33 per cent.¹

TEACHERS AND PROFESSORS.

Teaching in all public institutions is a state service regulated by law or by ministerial decree.

Qualifications, classification, and discipline of primary teachers.—Teachers of primary schools, if women, must not be under 17 years of age, if men, not under 18, and must be provided with a diploma of the first or second grade (*brevet élémentaire; supérieur*) secured by examination before a board appointed by the academic rector. This requirement had been met in 1888–89; in public primary schools by 96 per cent of the teachers on a total of 100,913, in private primaries by 80.63 per cent on a total of 41,747.

Of the teachers in public primary schools, 55,987 were men; 44,926 women; the corresponding numbers for private schools were 9,194 and 32,553.

Teachers are classified as *titulaires* (having full appointment) and *stagiaires* (probationers). *Titulaires* must have had two years' experience in the service and must also have passed the examination for the *certificat d'aptitude pédagogique*. They receive their appointment from the prefects (chief of departments) choice, however, being confined to lists furnished by the departmental councils and approved by the academic inspectors. *Stagiaires* are appointed by the academic inspectors. They constituted about 20 per cent of the total force employed in 1887. *Titulaires* have a life tenure which may be forfeited by misconduct; they may be pensioned at 60 years of age, after thirty years' service, and enter upon the enjoyment of an income equal at its maximum to one-half the mean annual salary which they had reached.

The teaching force comprises besides the regular teachers, special teachers, *i. e.*, teachers of language, manual training, etc. The qualification and appointment of these and also of teachers of departmental normal schools which are classified with the primaries, are as carefully and minutely regulated as those of the teachers already described. Teachers are subject to reprimand by the academic inspector and to

¹Official reports 1887–88, 1888–89, pp. XXI, XXII.

censure by the same official, cause being shown by the departmental council. The severe penalty of revocation may be pronounced by the prefect, the case being presented by the council.

Suspension and dismissal are inflicted by a decree of the departmental councils, the teacher having the right of appeal to the superior council.

Salaries.—Principal teachers are divided into three groups, viz, elementary, superior primary, and normal; each group is divided into five classes, with annual salaries paid by the State as follows:

	Primary schools.		Superior primary teachers.	Normal schools.	
	Men.	Women.		Men.	Women.
Fifth class	\$200	\$200	\$360	\$700	\$600
Fourth class	240	240	400	800	700
Third class	300	280	450	900	800
Second class	360	300	500	1,000	900
First class	400	320	560	1,100	1,000

An additional sum of \$40 is allowed principals in charge of a school of three or four classes, and of \$80 for a school of more than four classes.

Promotion from one grade of salary to the next may be made without a change of place; it depends upon the length and efficiency of service and can only take place when there is a vacancy.

Communes may, and often do, supplement these salaries. Moreover, every commune must provide its teachers with free residence or with a money indemnity for the same at fixed rates.

Teachers pledged to teach ten years in public schools are exempted from ten years' military service after one year in camp.¹

Qualifications and salaries of professors of secondary and superior instruction.—Professors of *lycées* and of *collèges communaux* are appointed by the minister of public instruction; professors of the *facultés* by the President of the Republic, upon the proposition of the minister. The choice in the latter case must be made from two lists, one presented by the council of *facultés* in which the appointment is to be made, the other by the permanent section of the superior council. All professors must be men of liberal education, having obtained university degrees. Salaries of professors, which are paid by the state, are higher in Paris and Lyons than in the provinces.

The range of salaries for principals of *lycées* is from \$1,200 to \$1,800; for professors, from \$640 to \$1,500. In the departmental *facultés* professors are graded into four classes, with salaries ranging from \$1,200 to \$2,200. In Paris there are but two grades of full professors, with salaries of \$2,400 and \$3,000, in law and in medicine; \$1,300, and \$1,600 in the *faculté* of Protestant theology.²

¹ For the regulations affecting teachers see laws of October 30, 1886, of July 19, 1889; also, *Législation et réglementation de 1878 à 1888* par F. Martel, Mon. Ped., tome 1, pp. 134-162.

² For regulations affecting professors see *Annuaire de l'instruction publique*; also *Statistique de l'enseignement supérieur*, 1876, 1877-78; *secondaire*, 1887.

Training of teachers.—The state makes large provision for the training of teachers and professors. Under Guizot's law of June 28, 1833, every department must maintain a normal school. This obligation was extended by the law of August 9, 1879, which requires every department to maintain a normal school for men and one for women. The two schools may be combined, if the superior council approves and the minister of public instruction sanctions the application to that effect. Candidates for admission to these schools must have obtained the *brevet élémentaire*, and for graduation must pass the examination for the *brevet supérieur*. A practice school is connected with each normal school, and with each normal school for women an additional infant school for practice.

In 1887 all the departments, excepting Oran (Algiers), had complied with the law as to normal schools for men, and in 1888 all but eight had an additional school for women. The statistics showed 90 schools for men, with 5,443 students, 606 nonresident professors, and 489 resident directors and assistants; 81 schools for women, with 3,544 students, 415 nonresident professors, and 474 resident directors and assistants. The number of graduates in 1887 was 1,709 men and 1,310 women. This gives a total of 19,754 graduates from 1877 to 1888, inclusive. The expenditure for the departmental normals in 1887 amounted to \$1,800,095, of which the departments furnished 83.25 per cent and the state 15.33; the remainder came from private revenues.

To insure sound pedagogic training in the departmental normals, the state has established two superior normal schools, one for men (St. Cloud) and a second for women (Fontenay-aux-Roses). These furnish professors for the local normals.

The superior normal school at Paris, maintained by the state, is the *alma mater* of a large proportion of the most celebrated professors, both of the *lycées* and of *facultés*. It is maintained at an annual cost of about \$103,000 and receives annually about 130 students. The state also maintains a special normal school at Sèvres for professors of *lycées* for girls. A chair of education has been created in the Paris *facultés* of letters and courses in pedagogies opened in several provincial *facultés*.

Subjects and courses of instruction.—The subjects of instruction for primary schools are fixed by the law of March 28, 1882. They comprise: Moral and civic instruction, reading, writing, the elements of arithmetic and the metric system; history and geography, especially of France; object lessons, and the first notions of science; elements of design, of singing, manual work (needlework in the schools for girls), gymnastic exercises, and in the schools for boys military drill.

In the superior primary schools these branches of instruction are reviewed and more fully developed. The course is extended to include algebra and geometry; natural science and physics, and their application to agriculture, to industrial arts and to hygiene; political economy, French language and literature, general history, industrial and com-

mercial geography, iron and wood work for boys, and cutting and fitting for girls. One foreign language is also included. Additional courses pertaining to local industries may be authorized by the minister upon the demand of local committees, supported by the academic inspector and approved by the departmental council.

Normal schools.—In the primary (*i. e.*, departmental) normal schools the studies of the primary course are reviewed with reference to methods of instruction, and at the same time developed to include the full scope and scholastic bearing of those subjects. Pedagogy and school administration are treated both theoretically and practically.

Instruction in the following subjects is given outside the regular class hours: in the normal schools for men, agriculture and manual work, military and gymnastic exercises, vocal and instrumental music; in the normal schools for women, needlework, housework and gardening, gymnastics, and vocal and instrumental music. The course of study in these schools covers three years.

The courses of study for secondary and superior institutions are elaborated in the superior council, due consideration being given to the opinions of the several *facultés* which are formally submitted by the academic rectors. These courses form a continuous scheme of study, starting at an elementary stage (*i. e.*, for pupils 8 years of age) and comprising the entire province of general and special knowledge. A relation has also been established between the *lycée* courses and primary instruction through the nonclassical division of the *lycées*, created in 1865 as a special course (*enseignement secondaire spécial*), and changed to modern course (*enseignement secondaire moderne*) by decree of June 5, 1891.

The course of the *lycées* leads to the bachelor's degree, which is the first of the series of university degrees, *i. e.*, bachelor, *licencié* and doctor. Candidates for degrees must be inscribed in the *faculté* corresponding to the degree sought, pay the required fees, and sustain the examinations. Only those who take inscriptions, as it is called, are classed as students. In addition, large companies of hearers attend the lectures of the professors. Candidates for degrees may pursue their advanced courses either under the *facultés*, in special schools or under private tuition.

The bachelor's degree stamps one as a man of liberal culture; it is, moreover, a necessary prerequisite to the higher degrees (*licencié* and doctor), which are the passports to professional careers.

Organizations and conduct of institutions.—The system of education reflects in its general structure the underlying theory of education as an integral process of development and the prerogative of all classes of society. The specializations of the system appear in the organization and conduct of institutions. These specializations can not well be set forth in an outline view. It may be said, in brief, that all institutions of the same grade are alike in their general features, which are determined by law or by ministerial decree.

CHARACTERISTIC FEATURES OF PUBLIC PRIMARY SCHOOLS.

The features common to all public primary schools pertain to classification, establishment, and pedagogic organization.

Classification.—Primary schools are divided into infant schools (*écoles maternelles*) for children 2 to 6 years of age; elementary primary schools 6 to 13 years inclusive, *i. e.*, the period of obligatory instruction; higher primaries (*écoles primaires supérieures*, and *cours complémentaires*) 12 to 14 or 16 years, and schools of manual apprenticeship, which partake theoretically of the character both of high schools and of technical schools as these terms are understood in our own country.

The statistics for 1888–89 show the following distribution of pupils:

Écoles maternelles.—Public, 464,110 pupils (with 5,100 directors and assistants); private, 243,412 pupils (with 3,472 directors and assistants), or a total enrollment of 707,522 as against 712,897 in 1887–88. Primaries—public, 4,450,351 pupils; private 1,176,550, or a total of 5,626,901. Of these, 37,930 pupils were in the *écoles primaires supérieures*, and *cours complémentaires*.

Schools of manual apprenticeship have as yet little development.¹

It is noticeable that the enrollment in primary schools has varied little in three years, the increase since 1886 being 26,482. Classes maintained for adults had an attendance of 181,099 pupils (155,781 men, 25,318 women) as against 187,168 in 1887–88.

Establishment.—The law requires every commune to establish at least one public elementary primary school, an obligation which in 1888–89 had been met by all but 68 communes out of a total of 36,121. Communes having more than 500 inhabitants must establish a separate school for girls unless a mixed school is sanctioned by the departmental council. Of 18,940 communes to which this provision applies all but 1,624 had complied in 1888–89.

Coeducation declines as this provision extends. The detailed statistics for 1888–89 show that of the 4,446,851 pupils in the public primary schools 2,459,497 were boys and 1,987,354 were girls. Of the entire number only 729,305 were in mixed schools, a decline of 3 per cent since 1885–86.

The establishment of all other classes of primary schools is optional with the communes. Although the establishment of primary schools is a charge upon the communes, the state has aided liberally in the work. From June 1, 1878, to December, 1888, inclusive, there were expended in the construction, repair, and furnishing of schoolhouses \$107,225,191, of which the state contributed 39 per cent, the departments 2.76, and the communes 58.24 per cent.²

¹ These schools, which the communes have the power to establish, must not be confounded with the *écoles nationales professionnelles*. These are schools designed for the complete education of children, including their preparation for practical industries or for admission to higher technical schools. Three such schools have already been established, *i. e.*, at Voiron, Armentières, and Vierzon, respectively.

² Statistique de l'enseignement primaire, 1886–87, pp. cxl–cxlii.

Gradation.—The course of elementary primary schools is arranged in three grades—elementary (*cours élémentaire*), for children 7 to 9 years of age; intermediate (*cours moyen*), 9 to 11; superior (*cours supérieur*), 11 to 13. There is usually an infant class for children under 7. Each division comprises two classes. The primary inspector superintends the classification of pupils at the beginning of the school year. Promotions are made annually. A pupil who has passed the examination for the certificate of primary studies which may be taken at 11 years of age can enter the *cours supérieur*. This examination is not obligatory, but the number of candidates seeking it steadily increases. In 1889 certificates were awarded to 165,211 pupils, about double the number in 1882.

The programmes of individual schools are determined in the departmental councils, and vary in different localities. Each teacher must arrange a time table for his own school, which, after approval by the academy inspector, must be hung up in the schoolroom.

Compulsory attendance.—The law of June 16, 1881, making instruction in public primary schools gratuitous, was followed within a year (March 28, 1882) by a compulsory law. This obliges parents and guardians to secure the attendance of their children or wards upon primary instruction under penalty of fine or imprisonment. Local school attendance committees (*commissions scolaires*) are constituted to keep watch over the matter and report violations of the law. Parents may choose either public or private schools or home instruction for their children. In the last case children must pass an examination in the work of the public schools each year of the compulsory period after the first. If the examination be unsatisfactory the parent must place the child in a public or private school. Furthermore, by means of communal funds (*caisses des écoles*) which, under the law of March 28, 1882, every commune must establish, necessary aid is extended to poor children to facilitate their attendance. The number of these *caisses* in 1890 was 16,175; the funds amounted to \$1,026,358; the amount disbursed to \$764,963. Under these very complete provisions it is not surprising that the instruction of all children between 6 and 13 years of age should have been practically accomplished.

According to the census of 1886 there were 4,729,511 children of school age, *i. e.*, 6 to 13 inclusive, in France. At the rate of increase prevailing from 1881 to 1886, the total in 1888 would have become 4,786,265. The children of school age on the registers of primary schools (infant schools included) in 1888-89 was 4,691,218, or 98 per cent of the estimated total.

The number between the specified ages attending *lycées* and local colleges and receiving instruction at home would very nearly make up the balance.

It is not so easy to determine the regularity of school attendance. The only statistics bearing upon this point are the results of enumera-

tions made in 1886-87 at two selected dates. From this it appears that the number of children present in public primary schools on the 4th of December, 1886, season of the highest attendance, was equal to 91 per cent of the enrollment at that time, and to 79 per cent of the annual enrollment; the number present on the 4th of June, 1887, season of lowest attendance, was 88 per cent of the enrollment at that time, and 72 per cent of the annual enrollment.¹

Secular character of public schools.—The law making primary instruction compulsory confined that of the public schools strictly to secular branches. The law of October 30, 1886, went still farther and prohibited any but persons belonging to the laity from teaching in the public schools. The five years allowed for the elimination of teachers belonging to religious orders from the schools for boys have just elapsed. The enforcement of this provision has been resisted in several places with the ultimate result of the transfer of pupils from public to parochial schools. The relative number of primary schools under lay and religious teachers in 1889-90 is brought into comparison with the same in 1878-79 in the following totals:²

	Number of schools.		Number of pupils.	
	1878-79.	1889-90.	1878-79.	1889-90.
Schools under lay teachers:				
Public.....	47,364	59,593	2,764,805	3,738,185
Private.....	5,439	3,635	262,755	158,515
Schools under church teachers:				
Public.....	12,984	7,766	1,217,997	667,358
Private.....	7,073	10,863	623,530	1,037,509

It appears from the above table that 5,218 public schools have been transferred from clerical to lay control, or suppressed during the decade. Of these, 1,489 were schools for boys, 3,224 for girls, and 505 for both sexes. During the same time there was an increase of 3,790 in the number of private parochial schools, viz, 1,198 schools for boys, 2,558 schools for girls, 34 for both sexes. On the whole, primary lay schools have made a gain above primary parochial of 6,015 schools and 118,002 pupils. The movement in the *écoles maternelles* has been just the reverse. Here there is a diminution of 407 lay schools with 5,894 pupils, and a gain of 1,062 denominational schools with 106,945 pupils.

Lycées and facultés.—The authority of the state in respect to the internal management of higher institutions is not less positive than in respect to primary schools. The state takes the initiative in the establishment of *lycées*, the communes in establishing local colleges (*collèges communaux*). The organization and conduct of these institutions are matters of elaborate regulation developed in the superior council,

¹ Statistique de l'enseignement primaire 1886-87, pp. VI, et LXXXVI-VIII.

² Rapport sur les résultats des laïcisations scolaires, par M. E. Levasseur.

decreed by the minister, and administered by the principals under the supervision of the academic rectors and councils.

The *facultés* are created by the state for the service of superior and professional instruction. Until recently they were wanting in all the attributes of autonomy. Civil personality was conferred upon them in 1885 by a decree authorizing them to receive, hold, and administer property, and the work of organization was begun by the creation of a council-general of all the *facultés* (*conseil général des facultés*) of an academic district, and a general assembly and a council of each individual *faculté*. The council-general of the several *facultés* of an *académie* consists of the deans of the faculties, together with two representatives from each faculty, chosen by their colleagues. It is presided over by the academic rector. This body regulates scholastic affairs of general interest to all the *facultés*, and has control of the finances. The general assembly of each *faculté*, which comprises all the members of the *faculté* arranges the details of the courses of instruction. The council of the *faculté*, which comprises only titular professors and *professeurs adjoints*, receives gifts and legacies on behalf of the *faculté* and distributes its revenues. The creation of these governing bodies foreshadows the transformation of the *facultés* into organic universities, a measure which is now under debate in the French Chambers.

Correlation of studies.—The ideal of unity which is typified in the administrative service of the system of education finds higher realization in the correlation of the courses of study. Students of liberal and professional education are drawn chiefly from the higher classes of society; nevertheless these courses have been brought within the reach of the common people since the *lycées* have been affiliated on one side (*i. e., enseignement secondaire moderne*) to the primary schools. This provision, moreover, has been made available by public scholarships open to competitive examination.

Higher education; women.—It should be noted also that women are admitted to the privileges and honors of the higher courses.

From 1875-'76 to 1887-'88, inclusive, university degrees to the number of 262 were granted to women. These included 39 in medicine, 130 in the sciences, 89 in classics and belles-lettres, 1 in pharmacy, and 3 in law. Of the whole number, 137 were obtained in Paris and the remainder in the provinces; 207 were conferred upon French women.¹ Women pursue degree courses in the state *facultés* or under private auspices. They form also a large proportion of the auditors at the public lectures of the *faculté* professors and of the Collège de France.

Special schools.—The special schools which complete the provision for higher instruction, and which are under the exclusive control of the minister of public instruction and fine arts, are the Collège de France, École Normale Supérieure, Muséum d'Histoire Naturelle, École Française de Rome, École Française d'Athènes, École Nationale des Chartes,

¹ Statistique de l'enseignement supérieur, 1878-1888, pp. 636-639.

École Spéciale des Langues Orientales Vivantes, École Nationale et Spéciale des Beaux-Arts à Paris, Conservatoire Nationale de Musique et de Déclamation.¹ The École Libre des Sciences Politiques at Paris is a private foundation which ranks with the highest institutions.

Auxiliary agencies.—The progress of education is fostered by many auxiliary agencies, both public and private. The most important of the former as regards the interests of primary education is the Musée Pédagogique. This includes a museum and a library for the collection of all material and publications which may aid the work or the researches of persons engaged in primary instruction. Here, also, classes and courses of lectures for teachers are maintained and publications issued which make known the best methods of instruction, the best plans for the construction and equipment of schoolhouses, and the results of many valuable historical investigations.²

¹ These special schools are treated in full in the successive *Statistiques de l'enseignement supérieur*, *i. e.*, 1865-1868, 1876, 1878-1888.

² For detailed account of the Musée Pédagogique, see article by M. Beurier, *Mon. Péd.*, tome III, pp. 3-38.

CHAPTER VIII.

ELEMENTARY EDUCATION IN LONDON AND PARIS.¹

Points of likeness and of difference between the systems of the two cities—(1) Supervisory authorities (the London school board); (2) Paris administrative service, State and city officials, local committees, medical inspectors—School attendance: (1) Ages for attendance and school population, London, Paris; (2) Statistics of accommodation, enrollment, and attendance, London, 1889-90, Paris, 1887-88; special agencies promoting school attendance in Paris—Support of elementary schools: Current expenditures, London, Paris; expenditure for buildings—The teaching force, number, salaries, training—Scholastic work of the schools: London schools, classification by obligatory subjects; work in additional subjects; physical exercises; manual training—Paris; classification by grades and ages; the daily programme; manual training—School savings banks—Results of instruction: London, reports of the annual examinations; diminution of juvenile crime; increased demand for good literature—Paris, opinion of Government inspectors, candidates for primary certificate; special investigation respecting the influence of the schools—Contrasts offered by the two systems.

ELEMENTARY EDUCATION IN LONDON AND PARIS.

The operations of the systems of elementary education in England and France are most strikingly displayed in the capital cities of the two nations. In England, it is true, particular features of the system are more highly developed in provincial cities,² but the magnitude of the work in London gives it surpassing interest.

In Paris the French system naturally reaches its highest possibilities; here it is that the theory, which in France always precedes practice, is elaborated and here the agencies for carrying out the theory are most perfectly organized. Many interesting points of likeness are noticeable in the educational provision of the two cities. In both the work is divided between public and private schools (chiefly parochial) and in both the utilitarian results of elementary instruction are kept steadily in view. On the other hand the radical differences between

¹ Prepared by A. Tolman Smith, specialist in British and French school systems.

² Birmingham has an organized system of schools comprising elementary schools for children from 3 to 12 or 13 years of age; seven grammar schools carrying education up to 16 years, and two high schools, one for boys, the other for girls. Fees are charged in the higher schools, but one-third of the places are free. There is also a free higher grade-school founded by the school board for giving two years' training in science and drawing to boys from elementary schools. The crown of this system is the Municipal Technical School.

the systems are most plainly manifest in the cities, which offer the widest fields for their operation. Apart from these differences there is a noticeable contrast in the spirit which pervades their operations. This is a difference which is more easily felt than expressed. In London there is a constant disposition to restrain the province of elementary schools; in Paris there is a constant tendency to extend their province and to correlate them to higher institutions.

Prior to 1870 public elementary schools did not exist in London; in Paris they date back to 1830, but the supply of school places has been increased by 68 per cent since 1871. At that time the 256 schools possessed by the city were badly organized and answered neither to pedagogic nor to hygienic requirements.¹ The 109 schools since created have been provided with excellent buildings well furnished and equipped while many of the older buildings have been reconstructed. Moreover the laws by which these schools are regulated have all been passed since the date specified (1871) and the Paris schools have become part of a national system.

SUPERVISORY AUTHORITIES.

London school board.—In accordance with the education act of 1870, the board schools of London are managed by a board elected by the ratepayers for three years. It comprises 55 members, organized in ten or eleven standing committees. In 1890, the board employed a permanent staff of 406 officers and clerks at an annual expenditure for salaries of £59,990 (\$299,950).² Of this staff 33 members were inspectors or superintendents of instruction, six were school-visitors. There were also 275 additional visitors³ employed to canvass every district of the city, to search out all children of school age (3 to 13), and to make a record of their names, home conditions, and status with reference to school attendance. The board officials act independently of the government inspectors, whose relation to the schools of the metropolis is the same as to those of the county at large.

The present board, whose term expires in November, 1891, is the seventh elected under the education act. The chairman, Mr. J. R. Diggle, is serving his second term in that position, having succeeded Mr. Edward North Buxton upon the defeat of the progressive party in 1885.

Paris administrative service.—In respect to educational administration, Paris pertains to the Department of the Seine, one of the nine departments of the Académie de Paris. The rector of this *académie* is the minister of public instruction, but the duties of the office are performed by the vice-rector, an office filled since February 11, 1879, by

¹ L'enseignement primaire public à Paris, 1877-88, par M. E. Duplan, sous-directeur de l'enseignement primaire au Département de la Seine (p. 223).

² School Board Chronicle, August 1, 1891, p. 102.

³ Report of the by-laws committee for the year ending March 25, 1890.

M. O. Gréard. On account of the unusual demands of this department, several academic inspectors are appointed by the minister for the supervision of educational affairs. One of these, who bears the title of director of primary instruction of the Department of the Seine, is specially charged with the direction of primary instruction under the control of the prefect of the department. To this officer is confided the oversight of all matters pertaining to elementary schools, even the choice of sites, the construction and furnishing of buildings, which in other cities of France are included in the general municipal administration. An under-director shares in the general control.

The administrative functions are exercised through four bureaux, *i. e.*, a central bureau charged with the creation and the material and pedagogic organization of all institutions for public instruction and with the general business of the department, a bureau pertaining to the interests of the teaching body, one for the administration of funds, the conduct of examinations, etc., and a fourth charged with the accounts of the municipal establishments. There is also a secretaryship for correspondence and for various special services.

The service of inspection is of two orders, pedagogic and administrative. For the pedagogic inspection, there are 17 primary inspectors, state officials appointed by the minister of public instruction and placed under the authority of the director of primary instruction, and 6 departmental inspectresses of infant schools (*écoles maternelles*). The city also maintains 15 inspectors and 6 inspectresses whose supervision relates to drawing, music, gymnastics, manual training, bookkeeping, and foreign languages.

For the administrative service, the city maintains 2 principal inspectors, 5 inspectors for the schools of boys, 6 inspectresses for the schools for girls, and 3 for infant schools (*écoles maternelles*).

An interesting feature of the supervision maintained by the city is the service of medical inspection which was regularly organized in 1879, and more perfectly systematized in 1884. The number of medical inspectors (who must be regularly graduated doctors) now employed is 126. Every school is inspected once a month as to its sanitary conditions, and at the same time the children are individually examined with a view to determining their general physical condition, and more particularly to testing the state of their eyes, ears, mouths, etc. The annual expenditure for this service has reached \$20,160.

Each *arrondissement* or municipal district has moreover a local service of supervision comprising the mayor and several assistants.¹ Cantonal delegates and special committees coöperate in this local service, which is rendered gratuitously.²

The London board has charge only of public elementary schools,

¹ Each of the twenty districts (*arrondissements*) of Paris has its own mayor.

² Rep. by M. E. Duplan. Part I, chap. II.

private elementary schools, although sharing in the Government grant, being wholly under their respective managers. In Paris, on the contrary, the director of public instruction exercises a measure of supervision over private schools.

SCHOOL ATTENDANCE.

Ages for attendance and school population.—Complete statistics of school attendance are attainable for both cities; beyond this, the report of operations is limited to the public schools.

The ages for school attendance, recognized in London as in England generally, are from 3 to 13, inclusive; the compulsory by-laws made by the board are applicable to children from 5 to 12 years, inclusive, unless they have passed the sixth grade,¹ which is the standard for exemption under the by-laws of the board, at an earlier age than 12. Paris is under the general law of compulsory school attendance in France, which covers the ages 6 to 13, inclusive. With these arrangements in mind, it is interesting to compare the school provision and school attendance in the two cities.

The magnitude of the work of London is suggested by the population. According to the census of 1891 this had reached a total of 5,633,332, including outer London, a population greater than that of any one of the United States, New York alone excepted. If outer London be omitted, the population of registration London (4,211,056) is still exceeded by two of our States only, *i. e.*, New York and Pennsylvania.

Out of this population there is an estimated school population of 826,477,² *i. e.*, six-sevenths of the children between 3 and 13 years of age, one-seventh being deducted for the children of the upper classes, who are not expected to attend the elementary schools. The visitors employed by the board in 1890 succeeded in scheduling 786,350 children 3 to 13 years of age, of whom 615,762 were presumably between 5 and 13.³

Paris, with a population a little more than half that of registration London (*i. e.*, 2,447,957 in 1890), has a school population relatively smaller and much more homogeneous. In 1886, the number of children of school age (*i. e.*, from 6 years completed to 13, inclusive) was 206,077.⁴

¹“To pass the Government examination in Standard VI the candidate must be able to read a passage from one of Shakespeare's historical plays, or from some other standard author, or from a history of England; to write a short theme or letter on an easy subject, spelling, handwriting, and composition to be considered; copy-books to be shown; (an exercise in dictation may, at the discretion of the inspector, be substituted for composition); to work problems in fractions, vulgar and decimal; simple proportion and simple interest. Questions involving recurring decimals will not be put to girls.”

²Report of the statistical committee for the year ending March 25, 1890, p. 3.

³*Ibid.*, p. 5.

⁴Report by M. E. Duplan, part I, p. 215.

No recent enumeration of the children of the proper age for infant schools (*i. e.*, 2 to 6 years) has been reported.

Statistics of accommodation, enrollment, and attendance; London.—The elementary schools of London (public and private), aided by the Government grant, afforded, in 1890, accommodation for 680,423 children, or 82½ per cent of the estimated number 3 to 13 years of age. Three-fifths of this accommodation was in board schools.

The average enrollment in both classes of schools (1889-90) was 653,932 (*i. e.*, 332,900 boys, 321,032 girls), equivalent to 79 per cent of the children 3 to 13 years. The enrollment of children between 5 and 13 was equivalent to 91 per cent of the number between those ages scheduled by the visitors.¹ Of the entire enrollment 443,143 were in board schools.

According to an enumeration made the 25th of March, 1890, it appeared that there were 158,662 children between the ages of 3 and 13 on the visitors' schedules whose names were not upon the roll of efficient schools. Of these 69 per cent were accounted for as follows: instructed at home or in private schools not inspected, 6,860; between the ages of 3 and 5 and not yet entered in schools, 102,663. The remainder, 49,139, comprised those who are wholly exempt, those who are permanently disabled, those who are in the country, those who are ill or delicate or who reside in houses where there is infectious illness, those who are out of school owing to the want of accommodation or owing to the accommodation being unsuitable, those who are under surveillance by the respective divisional committees, and a few others who cannot be classified."²

The average attendance maintained in the elementary schools, public and private, was 510,180, or 78 per cent of the average enrollment.¹ This is not considered to be a satisfactory outcome of the great efforts put forth to secure the instruction of the masses, more particularly as nonattendance and irregular attendance are limited almost entirely to the lowest stratum of the people. A special committee of the board have this subject under consideration with a view to devising means for increasing the average rate of attendance.

According to the report of the by-laws committee (1889-90) the several items here considered show increase since 1871 as follows: Number of children of school age, increase, 36.82 per cent; accommodation in efficient schools, 159.44 per cent; average enrollment, 193.87 per cent; average attendance, 192.70 per cent.²

Paris.—According to the official report covering the year 1887-88, the enrollment in the primary schools of Paris for children of the compulsory ages had reached a total of 193,251 (*i. e.*, 92,522 boys, 100,729 girls), or 93.77 per cent of the population of those ages, distributed as

¹ Report of by-laws committee (1889-90), p. ii.

² *Ibid.*, p. iii.

follows: Public schools, 62.8 per cent; private, 37.2 per cent.¹ From an analysis of these statistics it appears that 12,613 of the children included were below 6 years of age and 7,676 above 13. This leaves 23,115 children of the compulsory school age to be accounted for. Of these, 289 were in attendance upon higher primary schools (*écoles primaires supérieures*), 11,234 in secondary establishments (*lycées* and *collèges*); 2,000, it was estimated, were instructed at home. The remainder, 9,592, comprise those exempted by the possession of the primary certificate or under the law governing apprenticeship and those who have not quite completed their sixth year.

Allowance being made for these and for the increase of population from 1886 to 1888, it was estimated that in the latter year there were about 5,500 children, or about 2½ per cent of the school population, with respect to whom the law of compulsory school attendance was, to say the least, imperfectly enforced. The number absolutely without instruction is, however, doubtless much smaller. Complaint is made that many well-to-do parents omit the formality of declaring before the mayor their choice as to the instruction of their children. This neglect of the law makes it impossible to determine precisely the status of the entire school population.²

The accommodation in public schools is not equal to the demand for places, the number of applicants who had to be denied admission in 1888 being 4,457. Temporary provision was made by public scholarships in private schools for 1,848 of this number.³ The public infant schools (*écoles maternelles*), which have not been included at all in the foregoing statement, show a similar deficiency of places. The enrollment in these in 1888 was 25,700, besides which there were 5,177 applicants of suitable age (2 to 6) who could not be received. The city made provision in private schools for 745 of the number.⁴

By a comparison of the number enrolled (*inscrit*) in public schools for a specified period it appears that the average attendance in the schools for girls was 91.16 per cent and in the schools for boys 92.23 per cent of the enrollment.⁵ This, it will be observed, is a much higher ratio than has been reached in London.

Among the influences that have conduced to this result in Paris are the activity of the school-attendance committees (*commissions scolaires*) and the operations of the fund for stimulating attendance (*caisses des écoles*). From 1882 to 1888, inclusive, 48,097 cases of the violation of the compulsory law were examined by the attendance committees. In 9,064 instances the names of the delinquent parents were simply published, 615 cases were referred to the justices of the peace; in the remain-

¹ Report by M. E. Duplan, part I, p. 216.

² *Ibid.*, pp. 216-220.

³ *Ibid.*, p. 235.

⁴ *Ibid.*, pp. 59 and 63.

⁵ *Ibid.*, p. 213.

der the parents were admonished. The number of examinations in 1887-88 was 8,906, of publication only 1,933, of reference to the justices 89. For the most part it appears to be misfortune rather than indifference that causes the disregard of the school law.¹

In 1888 funds for promoting attendance (*caisses des écoles*) existed in every *arrondissement* of Paris. The total receipts were \$234,443 and the disbursements \$206,156.² These funds are used in procuring rewards for children who attend regularly and in providing necessary food, clothing, and other essentials for very poor children.

In 1880 a service of school dinners (*cantines scolaires*), which had been irregularly maintained before that date, was regularly organized by the municipal council, the expenses to be borne by the school funds (*caisses*) and such additional gifts as might be offered. Under this arrangement a noonday meal is supplied gratuitously to very poor children or at a specified price for those who can pay. These dinners consist of soup, meat, and vegetables, the children supplying their own bread. The average price for a dinner is 3 cents. In 1888 the daily distribution was 28,228 meals, of which 12,263 were gratuitous. The funds for the service amounted to \$96,491, of which 95 per cent was directly appropriated by the city. Some complaint is made of the unequal provision in the different *arrondissements*, but on the whole the measure seems to be a good one, especially in its effects upon the afternoon attendance.³

From the statistics here given it appears that London has an enrollment of about 91 per cent of the children 5 to 13 years and an average attendance of 78 per cent of the enrollment 3 to 13, as against an enrollment in Paris of 94 per cent of the children 6 to 13 and an average attendance of 91½ per cent of the enrollment.

SUPPORT OF ELEMENTARY SCHOOLS.

London.—The income of the London school board for the year ending September 29, 1890, was £2,008,868, or, omitting loans raised for building purposes, £1,758,868 (\$8,794,340). Of this sum 20 per cent was derived from the Government grant and 72 per cent from the rates, or a total of 92 per cent from public funds. School fees and books sold to children yielded about 7 per cent. The small balance came from endowments, gifts, etc. The total expenditure was £1,960,248 10s. The current expenditure (excluding purchase of sites, erection of buildings, school furnishings, and payments, either interest or principal, in loans) amounted to £1,321,874 (\$6,609,370). This included expenses of administration, 5 per cent; contributions to indus-

¹ Duplan, pp. 221-22.

² Duplan, p. 247.

³ The London Schools Dinner Association does a great work for poor children, but it can hardly be regarded as an integral part of the school system. In the stress of the winter (1891) \$500 a week were expended for dinners.

trial schools, 3 per cent; expense of maintaining elementary schools, 92 per cent; equivalent to \$6,089,635. This last sum gives, as the expenditure per capita of average enrollment, \$13.74, and per capita of average attendance, including that of night schools (6,700 pupils), \$17.30. The contribution from the rates for this expenditure represents 9.9*d* per pound of ratable values; the amount of the Government grant was equal to 19*s*. 1*d*. (\$4.95) per capita of average attendance. The average weekly fee charged in the schools was 2.12*d*.¹

Paris.—The public schools of Paris are maintained entirely by municipal appropriations. In 1888, these amounted to 19,853,512 francs (\$3,970,702) for primary schools for children of the compulsory ages, an increase of 154 per cent over the amount appropriated in 1878. The budget for the infant schools in 1888 was 3,606,032 francs (\$721,206.50) and for the five higher primaries (having an attendance of 2,485 pupils) 1,088,080 francs (\$217,616). The three budgets amounted to \$4,909,524. The appropriation for the primaries for children of compulsory ages included 6,348,550 francs for school furniture, rent of hired buildings, and the interest on loans for building purposes. Deducting this sum, the remainder, 13,504,962 francs (\$2,700,992), gives \$22.25 per capita of enrollment, 121,362 pupils. Teachers' salaries absorbed 63.42 per cent of the amount. The budget for infant schools included also expenditure for rent of buildings, purchase of furniture, and payment of interest on loans. This deducted, the balance, 1,909,132 francs (\$381,826), is equivalent to \$15 per capita of enrollment in the infant schools.

Extraordinary expenditures.—In both cities the expense of providing school buildings has been a heavy tax since 1870, although the burden is annually diminishing. A very recent estimate for London, bringing the account down to 1891, gives a total expenditure for this purpose of £8,439,000 (\$42,195,000), of which 13½ per cent has been paid, leaving a debt whose annual interest amounts to \$1,982,500. This is equivalent to a rate of 3*d*. in the pound of the present ratable value of the city.² The sum inscribed in the municipal budget of Paris since 1871 for the construction and furnishing of school buildings had reached in 1886 a total of 84,160,809 francs (\$16,832,162). Of this amount \$3,010,260 had not been exhausted.³

It is impossible here to go into details as to the architectural features of school buildings or the style and completeness of their furnishings. The statistics here given indicate a liberal scale of expenditure.

In the more crowded districts of London sites were held at enormous prices, but the earlier boards preferred to run the risk of being charged with extravagance rather than to fail of securing accessible locations

¹ See report of the committee of council on education, 1890-91. Table, p. 44, and report of school management committee, 1889-90, pp. xiv and xiva.

² Annual statement of the chairman of the London board (Mr. Joseph R. Diggle), 1891.

³ Duplan, part I, pp. 282, 283.

and the requisite ground plan. In both cities the buildings are large, accommodating generally from 300 to 500 pupils (in some cases even a larger number), arranged in various grades and requiring suitable rooms for collective and for special exercises. The plans shown in the official reports resemble in general the graded schools of our own cities. An admirable feature of the more recent school buildings of Paris is the arrangement of the covered courts and open grounds for gymnastics, recreations, etc. It is in the courts that the school dinners are usually served.

THE TEACHING FORCE.

London.—The board schools of London, enrolling in 1889-90, as we have seen, 443,143 pupils, employed a total force of 8,712 teachers. Of these there were, adults, 7,166; namely, 2,396 men, 4,770 women, or a proportion of 1 to 2; and pupil-teachers, 1,546; namely, 298 boys and 1,248 girls. The adult force was equivalent to 1 teacher for every 62 pupils enrolled and the entire number to 1 for every 50 pupils.

The salaries paid to the adult teachers amounted to £860,398 (\$4,301,990), giving a general average of \$1,215 for head teachers and of \$415 for assistant teachers.¹

Of the adult force 2,065 men and 3,134 women are classified as trained, 223 men and 1,214 women untrained, and 108 men and 422 women as ex-pupil teachers. The last class can hardly be considered as untrained, although they have not been through the training colleges. Including these the proportion of adult teachers who had been trained was 81 per cent. London has made provision for the instruction of its pupil-teachers in twelve central schools and allows them a fair proportion of time for self-improvement.

Paris.—The public primary schools of Paris for children of the compulsory ages, enrolling (1888) 121,401 pupils, employed 3,002 teachers, equivalent to 1 for every 40 enrolled pupils. Of this force 1,497 were men and 1,505 women, an equality in numbers not likely to be found elsewhere. These teachers were classified as follows: Directors (*i. e.*, in charge of schools having each two or more classes), men, 174; women, 194. Additional teachers having full appointments, men, 1,180; women, 1,130. Probationers, men, 143; women, 181. As regards training, 374 men and 338 women were graduates from the normal schools of the department of the Seine, 195 men and 43 women were from provincial normal schools, while 928 men and 1,124 women came from private establishments. All were possessed of diplomas or degrees, the majority having the higher grade diplomas. Of the entire force in 1888, 242 men and 239 women, or the small proportion of 16 per cent, had only the lowest diploma (*brevet élémentaire*). The Paris teachers without exception belong to the laity.

¹Report of School Management Committee, p. x, and tables, pp. 423-425.

The following table shows the status of the teachers with regard to salary in 1888:

Directors.

Class.	Men.		Class.	Women.	
	Salaries.	Number receiving.		Salaries.	Number receiving.
1	\$900	42	1	\$760	42
2	820	44	2	690	52
3	740	71	3	620	77
4	660	17	4	550	23

Additional full teachers.

Class.	Men.		Class.	Women.	
	Salaries.	Number receiving.		Salaries.	Number receiving.
1	\$600	300	1	\$500	225
2	540	306	2	450	278
3	480	277	3	400	334
4	420	285	4	350	301
5	360	155	5	300	173

These rates give a general average of \$879 for directors, \$661 for directresses, \$494 for additional instructors, and \$340 for instructresses, averages considerably above the salaries granted by the state.¹ The indemnity or money equivalent for residence, which the city must furnish, is \$160 for directors and directresses, and \$120 for additional teachers.

Additional sums are allowed for extra service.

With the exception of two small schools each school has as many additional teachers as there are classes. The directors and directresses are occupied wholly in supervision.

It should be added that in case of sickness or other adequate cause of absence, the salary is still continued, the city bearing the expense of a substitute.

The pedagogical conferences, which are held regularly, afford the opportunity for the completion of professional training, and each school is supplied with a reference library of special value to teachers.

The number of candidates for positions in the Paris schools is much greater than the demand, the excess of applicants being largely for positions held by men.²

SCHOLASTIC WORK OF THE SCHOOLS.

The actual work going on in the elementary schools of the two cities is the matter of chief interest. This can not here be set forth with any fullness of detail, but keeping in mind the courses of study elaborated

¹ See Report of Commissioner, p. 254.

² See Duplan, part I, pp. 111-116.

for the systems to which these schools pertain,¹ their work may be indicated by the classification of their pupils.

LONDON—BOARD SCHOOLS.

On the 25th of March, 1890, there were on the registers of the board schools of London 438,056 pupils; of these 121,968 were below standard I, either in infant schools or infant classes. These deducted, the classification, as regards the obligatory subjects, *i. e.*, reading, writing, and arithmetic, was as follows:²

	Per cent.
Standard I.....	25.7
Standard II.....	19.9
Standard III.....	18.1
Standard IV.....	15.9
Standard V.....	11.4
Standard VI.....	6.5
Standard VII.....	2.2
Ex-Standard VII.....	.3

In addition to the obligatory subjects, 65 per cent of all the departments presented children for examination by the Government inspectors in class subjects. The summary of this work is as follows:

Grant for English earned on an average attendance of 219,749 pupils; for geography, on an attendance of 122,492; for elementary science, on an attendance of 2,224; for history, on an attendance of 2,468 pupils; and for needlework, on an average attendance of 13,333 girls.³

In addition, grants for specific subjects⁴ were allowed in the case of 34,477 pupils or 61 per cent of the pupils eligible for those subjects, and about 12 per cent of all pupils above the infant classes. This includes 15,560 girls who passed in cookery.

The subjects most frequently taken in boys' departments were animal physiology, mechanics, and algebra, and in girls' departments, cookery and domestic economy.

It may be noted here that coeducation prevails to a limited extent, about 4½ per cent of pupils above the infant grade being in mixed departments. In the separate departments the boys outnumber the girls slightly.

Examinations in drawing, under the auspices of the science and art department, were held in 408 departments having an average attendance of 124,938 pupils. The instructor of singing reports that all the schools were able to meet the requirements of the code and to earn the full grant at their annual examination.

The reports of the instructors in physical exercises show excellent

¹ For English course see p. 243. For French course see p. 255.

² Report of School Management Committee, 1889-90, p. 12.

³ Report of School Management Committee, table pp. 9-12. These totals include duplicates, consequently the net total is not known.

⁴ For list of specific subjects see p. 244 of the Commissioner's Report.

results from the Swedish system of training. Among other special instructors are four science demonstrators for boys' schools, and one lecturer for schools for girls, and four special French teachers. These are all visiting teachers, having classes in different schools.

With respect to Bible teaching (which must be strictly nonsectarian) the school management committee say: "This is a subject which nearly all our best teachers enjoy, though head teachers take too little part in it. In Bible teaching there is almost unlimited choice of subject, abundant opportunity for using apt illustrations and arousing eager interest."

The interest of pupils is stimulated by the prizes offered by a private individual, Mr. Frank Peek and by the Religious Tract Society, and awarded upon the results of competitive examination. In 1890, the departments examined had an average enrollment of 306,882, of which number 82 per cent participated in the exercise.

The most interesting recent departure in the schools, is the provision for manual training. The instruction of boys in the use of tools was commenced in January, 1888, under the direction of a joint committee of the school board for London and the City and Guilds of London Institute. Funds for the first year to the extent of £1,000 were supplied by the latter. A request was also made for a sum of £250 to enable the joint committee to try the experiment of instruction in laundry work for girls.

During 1888 and 1889, there were about 580 boys receiving manual instruction one half-day per week, at 6 centers.

The classes were conducted by an organizing instructor with three assistants (practical artisans), whose salaries as well as the cost of timber, tools, etc., were paid out of the fund contributed by the City of Guilds Institute and the Drapers' Company.

Fifteen dollars of the amount was distributed in prizes of books, tools, etc.

The classes are being continued, and an extended syllabus has been adopted, enabling the scholars who remain during the second year to take up more advanced work.

Laundry classes.—In 1889, laundry classes were established at four centers; at the first three classes consisting of 12 girls each were held one day per week. The interest has been growing ever since. The committee are greatly encouraged to continue the work which they believe to be doing incalculable good in elementary schools. The subject was recognized in the new code (1890) and provision was made for a parliamentary grant in respect to it. The London school board have determined to extend the work.

Paris.—In Paris, the infant schools (*écoles maternelles*) are more completely differentiated from the schools for older pupils than is the case with the infant schools for London.

We shall consider here only the work of the primary schools for chil-

dren of the compulsory ages, which corresponds to the seven standards of the English schools. The division of the course into three grades, elementary, intermediate (*moyen*), and superior, is strictly observed in the Paris schools. The distribution of the pupils by grades in 1888 was as follows:¹

	Enrollment.		Attendance.	
	Boys.	Girls.	Boys.	Girls.
Elementary	35,008	28,947	31,504	25,729
Intermediate	21,906	17,527	20,642	16,229
Superior	9,712	8,301	9,304	7,976

The classification of pupils by age and by the length of time which they have spent in the schools is interesting as indicating the general tendency to complete the entire course. It appears that in the schools for boys, 5,712 pupils were from 6 to 7 years of age, as against 7,313 from 12 to 13 years. The corresponding numbers in the schools for girls were 4,961 and 5,743.² The falling off in pupils 13 and above is very marked. The length of time which each pupil had passed in the grade to which he belonged is shown in the following table.³

Number of pupils remaining in schools.

BOYS.

	One year.	Two years.	Three years.	Four years.	Five years.	Six years.	Total.
Elementary	12,152	12,024	6,897	2,731	946	348	35,008
Intermediate	9,943	7,915	3,164	702	142	40	21,906
Superior	5,653	2,961	919	125	31	23	9,172
Total	27,748	22,900	10,890	3,558	1,119	411	66,626

GIRLS.

	One year.	Two years.	Three years.	Four years.	Five years.	Six years.	Total.
Elementary	11,139	10,319	5,102	1,717	514	156	28,947
Intermediate	8,151	6,595	2,273	440	64	4	17,527
Superior	4,480	2,853	826	118	24	4	8,301
Total	24,770	19,767	7,201	2,275	602	164	54,775

The elementary course, including a preparatory class, which forms the transition from the infant school to the methods and subjects of the primary proper, is designed for three years, each of the higher courses for two years. The number of pupils remaining more than three years in the elementary course and more than two in the intermediate, viz, 13,179 (8,073 boys and 5,106 girls), as compared with the entire number in the superior course, viz, 18,013 (9,712 boys, 8,301 girls), shows that a very large proportion of the pupils pass their entire time in the two lower sections.

¹ Report by M. E. Duplan, part I, pp. 212, 213.

² *Ibid.*, p. 207.

³ *Ibid.*, 209.

The daily routine of the schools is set forth in the following table:¹

Weekly time table.

ELEMENTARY COURSE.

Subjects of instruction and other exercises.	Schools for boys and girls. Length of school day, 8:30 to 4:30.		Subjects of instruction and other exercises.	Schools for boys and girls. Length of school day, 8:30 to 4:30.	
	Number of lessons.	Time devoted to each subject.		Number of lessons.	Time devoted to each subject.
		<i>Hours.</i>			<i>Hours.</i>
Moral instruction	3	1½	Object lessons	2	1
Reading	13	6½	Singing	2	1
Writing	10	5	Drawing	2	1½
Arithmetic	5	2½	Manual work or sewing (for girls)	2	1½
Mental arithmetic (or metric system)	3	¾	Gymnastics	5	2½
Grammar	5	1½	Recreations	10	a 2½
French dictation	5	2½			
Selected recitation	1	½	Total		32½
Geography and history	5	2½			

INTERMEDIATE COURSE.

Subjects of instruction and other exercises.	Schools for boys. Length of school day, 8:30 to 4:30.		Schools for girls. Length of school day, 8:30 to 4:30.	
	Number of lessons.	Time devoted to each subject.	Number of lessons.	Time devoted to each subject.
		<i>Hours.</i>		<i>Hours.</i>
Moral and civic instruction	5	2½	5	2½
Reading and declamation	3	3	4	4
Writing	5	2½	5	2½
Linear drawing	2	1½	2	1½
Arithmetic and metric system	5	5	5	5
Physical and natural sciences	3	2¼	2	1½
French language	5	5	5	5
History	2	1½	2	1½
Geography	2	1½	2	1½
Manual work	2	1½		
Gymnastics	5	2½	5	2½
Sewing			1	1½
Singing	1	1	1	1½
Recreations	10	a 2½	10	a 2½
Total		32½		32½

¹ Duplan, p. 94.

a Not including the noon intermission of 1½ hours.

Weekly time table—Continued.

SUPERIOR COURSE.

Subjects of instruction and other exercises.	Schools for boys. Length of school day, 8 to 5.		Schools for girls. Length of school day, 8:30 to 5.	
	Number of lessons.	Time devoted to each subject.	Number of lessons.	Time devoted to each subject.
		<i>Hours.</i>		<i>Hours.</i>
Moral and civic instruction.....	5	2 $\frac{1}{2}$	4	
Reading and declamation.....	3	1 $\frac{3}{4}$	2	12
Writing.....	2	1 $\frac{1}{4}$	2	1 $\frac{3}{4}$
Linear drawing.....	1	1	1	1
Arithmetic and metric system.....	5	5	5	5 $\frac{1}{2}$
Physical and natural sciences.....	1	1	1	
History.....	2	1 $\frac{1}{2}$	2	1 $\frac{1}{2}$
Geography.....	2	1 $\frac{1}{2}$	2	1 $\frac{1}{2}$
French language.....	5	5	5	5 $\frac{1}{2}$
Hygiene, domestic economy.....			1	
Free-hand drawing and design.....			2	4 $\frac{1}{2}$
Singing.....	2	2	2	2
Manual work.....	2	3 $\frac{1}{2}$		
Gymnastics.....	3	1 $\frac{1}{2}$	5	2 $\frac{1}{2}$
Military exercises.....	2	4		
Cutting and making.....			1	2 $\frac{1}{2}$
Sewing.....			1	1 $\frac{1}{2}$
Recreation.....	8	2	10	2 $\frac{1}{2}$
Total.....		37 $\frac{1}{2}$		35

α Not including the noon intermission of 1 $\frac{1}{2}$ hours.

It is impossible here to follow the official report through the interesting exposition of this programme. With regard to manual training, in which Paris has given an important precedent for all countries, it should be observed that until 1886 time was found for this training outside of the regular school hours, *i. e.*, from 7 to 8:30 in the morning; from 4:30 to 5:45 in the evening, or on Thursday morning, the schools not being in session on that day. The subject is now included within the school hours. Since 1881 workshops have been established in 100 schools for boys, leaving 65 unprovided for.¹

The elementary school work of the two cities here considered differs widely in theory. The English conception of public responsibility in this matter is not only much more restricted than that of republican France, but the ideal of human development is narrower; nevertheless, in practice the schools of the two cities approach each other very closely.

It may be said that the London schools are working out an ideal; the Paris schools are working up to an ideal. We can not here consider the many supplementary agencies by which the influence of the schools is intensified and their province extended; the competitive exercises in singing and in drill, the intellectual contests, and the exhibitions of drawing and of manual work, which excite the emulation of pupils and gratify the pride of parents. The effort of the schools to

¹ For an interesting and impartial account of the internal work of Paris schools, the enthusiasm, the loving spirit and affability of the teachers, the interest and courtesy of pupils, see *Les écoles primaires de Paris*, by M. L. Keymeulen in the *Revue Pédagogique*, Belge, January 15, 1892.

inculcate thrift and economy should not pass unnoticed. In the London schools free use is made of the post-office savings system.

In the Paris schools, in 1888, savings banks (*caisses d'épargne scolaires*) had been established in 197 schools, and the deposits in the same had reached a total of \$86,775.

Results of instruction.—The annual government examination by Her Majesty's inspectors, which prior to 1890 were conducted on the system of individual examination, afforded an index to the results of the work in the London schools. The percentage of passes in the three obligatory subjects was greater in 1889-90 than had ever before been recorded for these schools, 97.3 per cent of the pupils having passed in reading, 92.4 per cent in writing, 90.4 per cent in arithmetic. In class subjects the percentage of departments earning the highest grant was also greater than for previous years, while the increased number of schools earning the highest rate of merit¹ grant showed an improvement in the tone of the schools and the general quality of the work. In his recent annual address the chairman of the board, contrasting the present situation with 1871, says:

"Notwithstanding the growth of the population in the interval, the number of juvenile offenders is only 3,872 in 1891, as against 9,993 in 1870. Of course the establishment in 1866 of industrial and reformatory schools has had much to do with this result; and it may be that many juvenile offenders who are now subjected to the reforming influence of industrial schools would at the earlier period have been punished by prison discipline and perhaps have inevitably fallen into the ranks of criminals. But when full weight has been given to these considerations a considerable margin of good still remains, which may largely be attributed to the elevating influence of good public elementary schools." * * *

"There are evidences on all sides that the average culture of the community has been distinctly raised. Good literature commands a more enlarged circle of readers, and the spread of public libraries, still more the inexpensive editions of standard works, are tokens of this wider taste."

The official statements of the government inspectors bear witness to the high average of excellence in the Paris schools. This representation is emphasized by the increasing proportion of pupils applying for, and passing successfully, the examination for the primary certificate (*certificat d'études*).

In the decade 1878 to 1888, the number of candidates from schools for boys rose from 2,591 to 5,873, and the proportion of passes from 64.50 per cent to 80.93. The corresponding increase for girls was from 1,853 to 4,427 candidates, and from 68.55 per cent to 78.35 passing suc-

¹ Chairman's annual statement covering the year 1890-'91, received as this goes to press.

cessfully.¹ The rise has not been constant, but the maximum numbers were reached the last year of the period. The report which we have been following embodies also the results of a special investigation, which was carried through every *arrondissement* of Paris, for the purpose of determining the actual condition and the general effect of the schools. This investigation bears out the favorable view already presented. Among the subjects covered by the inquiry, we note particularly that respecting the occupations of parents and the interest manifested by them in the schools. From the statements regarding these particulars it appears that the Paris schools are patronized by all classes of society, excepting the old nobility, and that a large proportion of parents are in sympathy with the schools.²

The public schools of London and Paris operate as has been said, side by side with parochial and other private schools, the latter comprising in London a little less than one-third, in Paris somewhat more than one-third of the entire elementary school attendance.

In any comparative study of the systems of the two cities, it should not be forgotten that the board schools of London have no organic relation to higher institutions; the primary schools of Paris on the contrary belong to one division of a comprehensive system whose crown is the University of Paris.

From this brief summary it appears possibly that Paris with its centralized system, has grappled somewhat more successfully than London with the problem of popular education. This inference would probably be strengthened by a more intimate knowledge of the infant schools and the higher primaries which have simply been touched upon.

These last, five for boys, and one for girls, resemble our most advanced English high schools which have large development in modern language and technical courses. To the higher primaries of Paris must be added the *collège chaptal*, a municipal institution comprising elementary and secondary courses, the latter both scientific and classical. Here the best theories of modern education are in practice upon a grand scale, the college affording ample accommodation for 1,200 pupils, which is about the annual membership. This college and the higher primaries compete successfully with the *lycées* in the work of secondary instruction. London is not destitute of institutions of secondary and higher grade,³ but they do not form part of the system provided for the masses. On the other hand the educational problem of London is much more complicated than that of Paris. The density of population, the mixture of nationalities in the poorest stratum, the con-

¹ Report by M. E. Duplan. Part I, p. 304.

² An interesting résumé of the investigation noted is given by M. E. Duplan. Part I, chap. vii.

³ A recent estimate gives the number of endowed secondary schools in London as 37, and of proprietary schools for boys 10. In these about 15,000 boys are educated. About 20 per cent of their pupils are from the artisan class; the larger portion 80 per cent from the middle class.

stant influx of emigrants have no parallel in the French capital. Under the English policy which leaves a large measure of liberty to localities and to individuals, the inertia of ignorance is not attacked by an external concentrated force, but yields, if at all, to an internal leaven. The movement, if slower than in Paris, is more deeply inwrought into individual character. The triennial election of the school board is in itself a great educational agent, rousing every ratepayer to a sense of personal responsibility in school matters and familiarizing the people at large with questions of administrative policy and ideals and with practical methods in the work of human enlightenment.

CHAPTER IX.

EDUCATION IN GERMANY.¹

INTRODUCTION.

The Annual Report of the Bureau of Education of 1888-89 offered a lengthy exposé of the public school system of Prussia, based on the official Prussian reports of 1887. Since the authorities of that Kingdom publish extensive statistics of public schools only at intervals of three years, a new statement concerning them coming from this Bureau would necessitate useless repetitions. There are, however, some features of education in Prussia not treated thoroughly in the Report of 1888-89, as, for instance, the middle and private schools in Prussia, and some trends that have developed of late. These subjects, together with a general statement of the educational facilities of the Kingdom of Saxony, are offered this year in lieu of a comparative statement of the Prussian schools. This Bureau is as yet unable to publish a comprehensive view of the Bavarian school system, for notwithstanding its endeavors to obtain official statistics from that country, it has not succeeded in gaining a comprehensive view of the entire system.

I.—MIDDLE SCHOOLS IN PRUSSIA.

[Sources of Information: (1) *Preussische Schulstatistik*, vol. 101. (2) *Pedagogium*, vol. 1890-91.]

Though the management of schools on the part of the state in Prussia is much more centralized than in the United States, the Kingdom has a great variety of public schools which do not supplement one another as primary, grammar, and high schools do in our country. The different classes of society have schools that exist independent of and in no organic connection with one another. Though many German educators urge a nationalization of the schools—that is, a reorganization which would give rise to a common school system, embracing primary and middle or secondary schools all in one organization—as yet the tendency of both the majority of the people and of the government is opposed to this. The much discussed “*Einheitsschule*” (common or union school) has no hope of immediate realization any more than had, during Minis-

¹Prepared by Dr. L. R. KLEMM, Specialist in foreign school systems.

ter Falk's administration, the efforts in favor of the "Simultanschule" (a fusion of Catholic and Protestant schools).

Individuality is a strong characteristic of the Germans, hence class distinctions call for the maintenance of separate kinds of schools, all of which admit their pupils at six years of age. But while the "Volkschule" has the great bulk of school-going population (86.3 per cent), other schools, the middle and high schools, have also a considerable portion of that population, as will be seen from the following summary :

		Per cent.
Elementary, public (in 1887).....	4, 874, 347	} or 86.3
Elementary, private	8, 763	
Middle schools (in 1887).....	402, 950	or 7.1
Secondary schools (in 1887)	353, 243	or 6.2
Normal schools and universities (in 1887)	22, 954	or 0.4

A not inconsiderable portion of the population in Prussia desires and aims at a higher education than is offered in the public elementary or people's schools. This desire has led in various portions of the state, noticeably in cities, to the establishment of institutions bearing such names as "Bürgerschulen" (citizens' schools), "Mittelschulen" (middle schools), "Rectoratsschulen" (rector schools), "Höhere Knabenschulen" (higher schools for boys), or Stadtschulen (city schools, in contradistinction to people's schools), and not only serving the object mentioned, but in addition to that paying some regard to the conditions of industrial life among the so-called middle class of society.

The foregoing has reference to the boys. To the girls all secondary institutions of learning, such as gymnasia, etc., are closed. The German government debars the female sex from the universities, and admits only boys to all schools that lead up to the university. A great number of separate schools for girls was needed to meet the demand for a higher grade of education than the elementary schools could offer. These middle or advanced schools for girls are generally called "Höhere Mädchenschulen" (higher schools for girls), if not named after some philanthropist who founded or endowed them; thus a few are called after famous queens and empresses, such as Queen Louise, Empress Augusta, and Empress Victoria.

In a chart contained in the last Report of this Bureau (see page 178) these two groups of middle schools are represented in the statistical summary only. Perfect accuracy could not be claimed. We are able this year to give a more detailed statement.

The courses of study of these institutions, both for boys and girls, have generally developed without the state's interference. A greater variety in objects and in means to attain these objects was possible, since previous to the decree commonly known as the general regulations of 1872 (Minister Falk) no regulations or prescriptions for their administration had been issued. Even to-day a tabular summary illustrating the objects of these institutions would be a vain endeavor. The regulations mentioned (those of 1872) offer some suggestions for the estab-

lishment and characteristics of these schools. According to these regulations instruction in middle schools should not be as extended as that of the public high schools, nor should it be a continuation of the grammar school, but be parallel with instruction in the public schools, and only in higher grades go beyond the aims of the latter. The middle school (to use a convenient generic term) was required to have at least five ascending grades, with a maximum number of 50 pupils in each. The regulations also provided that if the establishment of middle schools was impracticable in any community, the elementary school (Volksschule) might in the upper grades go beyond the course laid down for it, so as to act as a makeshift until better circumstances would justify the establishment of a separate middle school. In places where fully graded elementary schools prepare the way for middle schools, these latter are confined to two or three grades only, but a separation of the sexes is required. Furthermore, it was permitted to incorporate the higher grades of elementary schools in the middle schools; that is to say, to divide a public elementary school into an elementary and a middle school department; but it was expressly emphasized that the elementary school course should be completed by all the children who do not intend to enter the middle schools. However, such hybrid institutions are rare. The dense population of Prussia generally enables the cities to maintain middle schools independent of elementary schools, which middle schools admit their pupils at six years and keep them till they reach the seventeenth year.

Course of study.—The “General Regulations” (1872) give a model course of study for middle schools calculated to cover six grades, but do not require a strict adherence to it. Wherever local circumstances make desirable due regard for agriculture, manufacturing, mining, commerce, and navigation, changes may be made in the course to meet these circumstances. A few things in the regulations, however, are mandatory, as for instance, in every middle school the teaching of one modern language is obligatory; but only in full middle schools (that is, such as are not in connection with the people’s schools) may two modern languages be made obligatory. Pupils who are to be prepared for the higher grades of secondary schools (being prevented by too great a distance from attending the latter) may take up Latin as an optional study.

Concerning the study of French or English the model course of study contains the following: “The aim is a proper pronunciation and good spelling of the foreign language, as well as the ability to read easy prose writings without the use of the dictionary; to compose simple business letters, and to converse in that language within the limits of common conversation. In schools with more than six grades the ability to understand the selected works of some poets, as well as some acquaintance with the literature of the foreign language studied, is

required." It goes without saying that both in conversation and composition more is expected here than in schools of only six grades.

In schools of six grades the course requires that the foreign language begin with the fourth year of the school. At first an elementary book and a reader are to be used, afterward a grammar, and in the highest grade selected prose pieces and poems for reading. If the school has more than six grades the history of literature is added.

Time-table.—The following time-table, suggested by the model course mentioned above, shows what branches are taught and how many lessons (hours) per week are devoted to each:

Branches.	Number of hours per week in—					
	First year.	Second year.	Third year.	Fourth year.	Fifth year.	Sixth year.
Religion	3	3	3	2	2	2
German (including literature and composition)	12	12	12	8	6	4
Arithmetic	5	5	5	3	3	3
Geometry				2	2	3
Natural history				2	2	2
Physics and chemistry					2	3
Geography			2	2	2	2
History				2	2	2
Foreign language				5	5	5
Drawing			2	2	2	2
Singing	2	2	2	2	2	2
Gymnastics	2	2	2	2	2	2
Total	24	24	28	32	32	32

Grading.—The latest statistics published concerning the public middle schools of Prussia (both boys' and girls' schools) enable us to offer a better statement than was possible hitherto.

The public middle schools for boys and those for girls are mostly found in cities, rarely in the country. In 1887, Prussia had—

	In cities.	In the country.	Total.
Middle schools	535	41	576
Number of class rooms	4,051	107	4,158
Number of classes	3,709	109	3,818
Boys'	1,227	53	1,280
Girls'	2,271	9	2,280
Mixed	211	47	258

From these figures it is obvious that most of the middle schools in the country are embryonic, and have not developed beyond a mere beginning. The number of classes is small, and in nearly one-half of them boys and girls are taught together.

(NOTE.—It is the generally accepted rule in Germany to separate the sexes in all schools that are not specifically people's or elementary schools.) Even in cities are found a good many middle schools that

have not proceeded in their organization beyond the lowest grades, a fact which the following summary will illustrate:

Middle schools with—	In cities.	In the country.	Total.
One grade	35	13	48
Two grades	40	9	49
Three grades	51	11	62
Four grades	64	4	68
Five grades	65	2	67
Six grades	84	2	86
Seven or more grades	196	.....	196

Thirty-seven country and 190 city middle schools and girls' higher schools had less than five ascending grades. Hence, it may be concluded that many of these schools, though claiming the distinction of being middle schools, are scarcely entitled to it, and are, properly speaking, nothing but elementary schools. Five and more ascending grades were found in 349 schools, or about 60 per cent of all the middle schools. The provinces of Prussia, taken separately, have middle schools as follows:

Provinces.	In cities.	Provinces.	In cities.
Brandenburg with Berlin	83	Hesse-Nassau	39
Rhenish Prussia	75	Silesia	26
Hanover	68	Posen	23
Westphalia	67	Schleswig-Holstein	21
Saxony	66	West Prussia	21
East Prussia	44	Hohenzollern	2
Pomerania	41		

Pupils.—In 1889 the 576 middle schools of Prussia had 134,937 pupils. This is a remarkably low number, particularly if we consider that of this total number 81,913 are girls, and only 53,024 boys. If, however, the fact is considered that the boys in Germany usually attend secondary schools where girls are not admitted, we see that these middle schools are really the girls' secondary schools. In the year 1887 the gymnasia, realschulen, realgymnasia, etc., had 151,541 pupils, all boys. Now, if to that number we add the number of boys in middle schools, to wit, 53,024, and furthermore, 12,625 boys of private institutions of like character, we find the total number of boys who attempt to acquire an education beyond that which the elementary school offers, to be 217,190. In other words, of all the boys who receive a higher education than the elementary schools offer, 30 per cent are found in middle and 70 per cent in secondary schools.

Adding to the number of girls in public middle schools, namely, 81,913, the number of those who are found in private institutions of like character, namely, 55,748, we find the sum total of female pupils who aim at more than an elementary education, to be 137,661. Comparing the two totals we find the boys in the lead; a state of affairs

which is explained by the fact that in Germany not so many chances are offered to women to work in the higher walks of life as in America.

	Boys.	Girls.
Public secondary schools.....	151,541	.....
Public middle schools.....	53,024	81,913
Private middle schools.....	12,625	55,748
Total.....	217,190	187,661

Hence it would seem that in 1887 there were 79,529 more boys than girls who aim at a higher grade of education than a simple elementary school offers. In reality however, the difference is not quite so great as the foregoing figures indicate, since thousands of Prussian girls are taught by private governesses, or attend private finishing schools in Switzerland, England and other countries. And the other fact, to wit, that the boys' high schools, the gymnasia, etc., keep their students till they are 20 years of age, tends to show that the aforementioned difference between the number of boys and girls is not as large as the tables indicate; about 10,000 to 12,000 boys of over 18 years of age are still in school preparing themselves for the universities when the girls have left school. But, however we may try to explain away the discrepancy, the fact remains that the state pays more attention to the secondary education of boys than to that of girls, and for superior education of girls in universities the state does nothing at all.

Another remarkable thing is noticed when we compare the unequal use made of these schools by the different religious denominations.

The following table is instructive:

Religious denominations.	Popula- tion of Prussia.	In public middle schools.		In private middle schools.	
	Percent.	Number.	Percent.	Number.	Percent.
Protestants.....	64.4	115,203	85.58	164,439	80.88
Catholics.....	34.0	9,969	7.39	21,162	10.41
Other Christians.....	0.3	544	0.40	859	0.42
Hebrews.....	1.3	9,225	6.83	16,850	8.29
	100.0	.....	100.00	.....	100.00

This table shows that the Catholic population does not make use of the middle schools in the same proportion in which Protestants and Jews do. A similar fact may be observed when scanning the statistics of high schools. In 1887 there were 72.5 per cent Protestants, 17.6 per cent Catholics, 0.25 per cent other Christians, and 9.1 per cent Jews, and in the universities the proportion of students was 67.94 per cent Protestants, 20.12 per cent Catholics, 0.36 per cent other Christians, and 9.58 per cent Jews. So the discrepancy in the number of Catholics in middle schools is not an isolated case. It is only marked more prominently than in the higher and highest seats of learning. Everywhere, in

middle and secondary schools, and in universities, the participation of the Catholic population is comparatively smaller than that of the Protestant and Jewish population. The cause of this is not so much because Catholics undervalue intellectual culture, as in the fact that the majority of the Catholic population do not live in cities where higher seats of learning are established, but in the country and in villages. The Protestants and Jews, having easy access to middle and high schools, frequent them to a greater degree than the Catholics. Among the farmers and small landowners are comparatively more Catholics; the agricultural people of Prussia are generally poorer than the city people.

Though these explanations seem plausible, they do not remove the fact that the Protestant and Jewish populations in Prussia far surpass the Catholic population in their respective numbers of students of middle and higher schools. The truest test would be to compare the ratio of Catholic, Protestant, and Jewish children in the lower or elementary schools with the ratio of Catholic, Protestant, and Jewish population, if it were left to the free will of all to choose whether to make use of these schools or not. But the state compels all children between 6 and 14 years to attend school, hence that test is out of the question.

Teachers.—Concerning the number of teachers in middle schools, official statistics give the following summary:

Teachers.	Men.	Women.	Total.
Protestants	2,987	1,081	4,018
Catholics	373	113	486
Other Christians	2	1	3
Jewish	70	12	82
Total	3,432	1,157	4,589

From this it is seen that about 25 per cent of all the teachers in public middle schools are women, hence that women hold positions in these schools more frequently than in the lower, the purely elementary, schools of the kingdom. The greatest ratio of women teachers in Prussia is found in private middle schools, where 2,422 of 3,126 (or nearly 80 per cent) are women. That women should be employed more frequently in middle schools than in any other grade of schools is owing to the fact mentioned before, that the middle schools are virtually the secondary schools of the girls, others being closed to them; furthermore that the proprietors of private higher schools for girls resort to women teachers because they work for lower salaries than men. In all the public schools of Prussia (elementary, middle, and secondary) only 10,600 women teachers were employed, or 14 $\frac{1}{4}$ per cent of all the teachers in the kingdom.

In the middle schools the number of pupils per teacher was 33.6 in 1887.

The total expenditure of public middle schools was \$2,701,807 in the same year, of which sum \$923,047 were required for the erection of buildings and for rent and incidental expenses. The communities paid 85.29 per cent of this sum, the state only 1.39 per cent of the remainder; 12.32 per cent was raised by tuition fees. The salaries amounted to \$1,778,760, which sum was obtained from tuition fees (69.28 per cent), communal taxes (25.73 per cent), state appropriations (3.16 per cent), and interest on irreducible funds (1.82 per cent). The foregoing sum total paid for salaries includes these two items: Pensions to teachers, \$62,870, and contributions to widows' and orphans' fund, \$9,386.

Salaries.—The following table shows the average salary paid to teachers in middle schools in the different provinces of Prussia:

Province.	Salary.	Province.	Salary.
Eastern Prussia	\$412	Saxony	\$424
Western Prussia	442	Schleswig-Holstein	519
City of Berlin	828	Hanover	454
Brandenburg	423	Westphalia	468
Pomerania	469	Hesse-Nassau	589
Posen	458	Rhenish Prussia	558
Silesia	522	Hohenzollern	325

The following table, however, in which the teachers are classified in groups according to their annual salaries (including rent and fuel), reveals facts which are covered up in a table of averages:

Number of men.	Number of women.	Salary received.	Number of men.	Number of women.	Salary received.
55	123	a \$225	306	45	\$487 to \$525
118	153	225 to \$262	166	25	525 to 562
187	199	262 to 300	178	11	562 to 600
160	130	300 to 337	88	9	600 to 637
268	132	337 to 375	158	4	637 to 675
227	69	375 to 412	60	1	675 to 712
305	89	412 to 450	120	1	712 to 750
212	29	450 to 487	386	2	b 750

a Or less. b Or more.

The majority of male teachers have an income of over \$450; the majority of women an income of over \$300.

One hundred and forty-four male teachers were on the pension roll, that is one for every 42 men in active service; 103 female teachers were living on a pension, or one for every 9 in active service. The average pension of men was \$354, that of women \$118 per annum. The current expenditures (for salaries) amounted to \$466 per class, which was \$13.18 per pupil. The entire expenditure (including erection of buildings and rent) was \$708 per class, or \$20 per pupil. Since the tuition fee was \$9 per annum state and communities had to pay \$11 per child. In order to better comprehend this statement it may be added that the per capita in secondary schools (that lead up to the university) was \$45 in the same year, which necessitated an expenditure on the part of the state and communities of \$26 per capita.

II.—PRIVATE SCHOOLS IN PRUSSIA.

[*Sources of information.*—(1) Preussische Schul Statistik, Vol. 101. (2) Paedagogium, Vol. 1890-91.]

Before the public schools of the Kingdom had the care and close supervision on the part of the state which they have now, many more private schools were in existence than at present. During the last 25 years the private schools have not increased in numbers, but perceptibly decreased. The following tables will show this:

A.—IN PRUSSIA BEFORE ITS AGGRANDIZEMENT IN 1866 (ONLY 8 PROVINCES).

	1861.	1864.	1871.	1886.
Private schools.....	1,434	1,460	1,409	888
Number of classes.....	2,044	3,105	3,414	2,942
Number of pupils.....	84,021	88,064	88,714	63,144

B.—IN PRUSSIA AFTER THE WAR OF 1866 (12 PROVINCES).

Private schools.....	.....	.....	1,868	1,209
Number of classes.....	.....	.....	4,481	3,783
Number of pupils.....	.....	.....	107,121	77,136

These numbers comprise all the private schools of elementary and middle (or lower secondary) grade.

This retrogression of the Prussian private schools since 1871 is explained by the statement that communities which formerly supported them, while leaving their management in private hands, have all changed them to public schools. The existence of other private schools is made impossible by the progress the public schools are making under the care of supervisors who are abreast with the times. Only where a private school has a renowned educator at its head who makes his institution an experimental station for new ideas, theories, and methods, does it find ample support.

In 1871 the average number of classes in the private schools was 2.39, with 57.3 pupils in all; in 1886 the average number of classes was 3.13, with 63.8 pupils in all. While the number of schools decreased from 1,409 to 888 (respectively from 1,868 to 1,209), the number of classes in each school increased. In Berlin alone the number of pupils in private schools, between 1882 and 1888, decreased from 21,520 to 19,577, while during the same period the number of pupils in public schools increased from 138,294 to 186,027.

In both city and country private schools the retrograde movement from 1871 till 1886 is noticeable, but from obvious reasons more so in cities than in the country. Compare the following table:

	In cities.		In the country.	
	1871.	1888.	1871.	1888.
Private schools.....	1,382	894	486	315
Number of classes.....	3,744	3,266	737	517
Number of pupils.....	93,720	68,698	13,401	8,438

A.—PRIVATE ELEMENTARY SCHOOLS.

In Prussia the purely elementary private school has scarcely any importance, either in numbers or in influence. In 1887 there were—

	In cities.	In the country.	Total.
Private elementary schools	150	98	248
Number of classes	240	128	368
Number of teachers	210	123	333
Number of pupils	5,627	3,136	8,763

If we compare this total with the number of pupils in public elementary schools (4,883,110), it appears very insignificant, about two-thousandths of one per cent.

The average number of pupils in these private elementary schools was 37.5 in cities and 32 in the country. The largest school of this kind is found in the governmental district of Düsseldorf; it has 1,266 pupils; two are found in Berlin with 351 and 758 pupils; most of the others are very small. Among 248 private elementary schools 190 had only one class room with less than 30 pupils.

Grading.—The following table shows how modest is the organization of private schools. There were found—

Private elementary schools with—	In cities.		In the country.		Total.	
	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.
One grade	103	2,006	87	1,336	190	3,342
Two grades	25	1,041	6	273	31	1,314
Three grades	15	981	3	156	18	1,137
Four grades	4	403	1	105	5	503
Six grades	2	440	.....	.....	2	440
Seven or more grades	1	756	1	1,266	2	2,022
Total	150	5,627	98	3,136	248	8,763

The attendance in these schools is considered regular. Only 18 classes are overcrowded, having 1,470 pupils (\$1.7 average), while 276 classes have 3,837 pupils (average 14).

The separation of the sexes is carried out in 183 of 368 classes, so that 2,047 boys and 2,977 girls are taught separately. In 185 classes the two sexes were taught together; these classes have 1,646 boys and 2,093 girls. The private elementary schools have altogether 3,693 boys and 5,070 girls.

Among the 8,763 pupils only 173 were from families in which German is not the mother tongue. The religious denominations were represented as follows:

Religious denomination.	In cities.	In the country.	Total.	Per cent.
Protestants	3,990	2,074	6,064	69.20
Catholics	1,227	894	2,121	24.20
Other Christians	59	3	62	0.71
Jews	351	165	516	5.89
Total	5,627	3,136	8,763	100.00

Besides the 333 teachers (129 men and 204 women) employed full time, 113 assistants, or special teachers, chiefly music, drawing, gymnastics, and manual-training teachers, were employed.

B.—PRIVATE MIDDLE SCHOOLS.

The private secondary or middle schools are, to this day, as they used to be in the past, a valuable part of the Prussian educational system. In regard to numbers they surpass the public middle schools, but do not reach their extent; that is, as a rule are not as large. While 576 public middle schools had 134,937 pupils, 961 private schools of this kind had only 68,373 pupils, which is on an average 71 pupils per school. The private middle schools have 3,415 classes, or 3.55 per school, and each class about 20 pupils.

The following table shows in what proportion cities and the country participate in maintaining private middle schools:

	In cities.	In the country.	Total.
Private middle schools	744	217	961
Number of classes	3,026	389	3,415
Number of teachers	2,782	344	3,126
Number of pupils	63,071	5,302	68,373

Hence the cities have 92.2 per cent, the country having only 7.8 per cent of the sum total of pupils.

Grading.—The following table shows the organization of the private middle schools:

	Number of schools.	Number of pupils.
Ungraded	303	4,915
Two grades	128	3,593
Three grades	134	6,201
Four grades	116	8,655
Five grades	86	8,103
Six grades	52	6,526
Seven grades	136	30,380

The fact that there are middle schools with less than three grades requires the explanation that they are schools accepting pupils only after they have acquired a certain advanced grade of education, so-called finishing schools; they are still in their infancy, expecting to build up higher grades as their pupils advance in sufficient numbers.

The private middle schools are chiefly used as girls' secondary schools, since among 68,373 children attending them there are 55,748 girls and only 12,625 boys, and most of the latter are sent to these schools only temporarily at a tender age. This is seen from the fact that 3,016 boys and 3,030 girls are taught together in mixed classes.

The religious denominations are represented as follows:

	Number of pupils.	Per cent.
Protestants.....	49,336	72.11
Catholics.....	11,193	16.36
Other Christians.....	315	0.43
Jews.....	7,629	11.10

Pupils whose mother tongue is other than German are somewhat more frequently found in private than public schools. Besides purely German children there were those in whose families is spoken—

Only Polish.....	749
Polish and German.....	404
Only Danish.....	137
Danish and German.....	64
Another language, but no German.....	250
Another language and German.....	148

Teachers.—In private middle schools there were engaged—

	Men..	Women.	Total.
Full-time teachers.....	704	2,422	3,126
Special teachers.....	2,290	704	2,994
Industrial teachers.....		826	826
Total.....	2,994	3,952	6,946

The full-time teachers had an average of 21.9 pupils. Of the total number of teachers 77.48 per cent were women. The religious denominations are represented among the teachers as follows:

Religious denomination.	Men.	Women.	Total.	Per cent.
Protestants.....	565	1,949	2,514	80.42
Catholics.....	106	412	518	16.57
Other Christians.....	20	31	51	1.63
Jews.....	13	30	43	1.38

The private schools in Prussia, notwithstanding their decrease in numbers, exercise still an important influence upon public life. They offer to a great number of women teachers a modest income, which is a fact not to be underrated in a country so overcrowded as Prussia is. While the public elementary and middle schools had, during the same year (1887), among 58,765 full-time teachers only 7,869 (or about 11 per cent) women, the private schools had, among 3,459 teachers, 2,616 (or 77 per cent) women.

The authorities of public schools, especially in the country and more especially still in Protestant countries, seem to be averse to the employment of women, which is seen from the fact that in all the country schools of the kingdom only 442 Protestant women are employed as

teachers, while 2,304 Catholic women teachers are found in country schools.

Hence, the private school has a mission to perform, first, in showing that women can compete with men in the province of education, and, secondly, in opening up opportunities for women in the battle for sustenance, which is increasing in severity every year in the Old World.

III.—GERMAN CITIES AND PUBLIC PLAY.

[From the educational press of Germany.]

Observant people have become aware, during late years, of the ravages caused in our physical natures by excessive mental exertion in school and life, by living closely together in cities and especially in tenement houses, by the frequently antihygienic conditions of factories and workshops, and also by the many habits arising from our high degree of intellectual culture. Under these antihygienic influences the individual suffers loss of labor, health, energy, and joy in life. While it is true that moral resistance may decrease these evil influences which no one can quite escape, it is also undeniable that an increase of immoral monstrosities can be directly traced to them.

The nations of the Old World are awakening to the consciousness of the chain of cause and effect in this matter, and in Germany more than in other civilized countries a reaction is taking place which may prove most beneficial in the future. Many measures of recent date instituted by the State, communities, schools, and societies are eloquent witnesses of this reaction. But, however much has been done to ward off antihygienic influences and to improve the health of all, it does not seem to keep step with the influences steadily at work in vitiating and deteriorating health.

One remedy has not been applied as yet in Germany, and that is constant physical training in youth by means of suitable exercises and exhilarating motion, and this, perhaps in moderate form, continued all through life. What has been done hitherto is quite insufficient. Gymnastic exercises in school, for instance twice a week, are not enough to counteract deteriorating influences upon health. Neither are students of secondary schools and universities accustomed to exercise their bodies sufficiently, as Minister von Gossler has shown by statistics. Young men belonging to the commercial and industrial classes, as well as tradespeople and artisans, do still less in this direction. Societies for athletic sport are rare and have only few members. What individuals do in the way of physical culture is not of much influence upon the great mass of the people. Observant people ask, what shall be done?

Of course a beginning is to be made in childhood and youth. Physical strength must be brought to a greater development in school than has been done hitherto. In order that this influence may continue after the child has left school it is necessary to awaken a pleasure in physical exercises and movements. Nothing in this world is done well unless

it be attended with pleasure. This pleasure is found in "applied gymnastics," in play. Play awakens not only a feeling of happiness, as Herbert Spencer says, but it is also the strongest means for invigorating the nervous and muscular system. It is also an essential factor for the promotion of morality; hence it is desirable, and indeed peremptorily necessary, for young men and women to continue bodily exercises, particularly play, after they have left school. Everything in this respect depends upon habit. There are some indications of the fact that outdoor play begins to develop into a national custom. Even people who do not participate therein sympathize heartily with the movement.

It is well known that in England, and to a great extent also in the United States, outdoor play is practiced by young and middle-aged persons. A vivid description in German of the customs in England concerning play has been furnished to the general reading public by Mr. Raydt, a school principal in Ratzeburg, in a book which has met with great approval. It is entitled "A Sound Mind in a Sound Body." In Germany also the number of cities and villages in which outdoor play is encouraged by authorities and the press is increasing. However, "if two do the same thing it is not the same," that is to say, German institutions will forever be essentially German. It is impossible to introduce into German society such national plays as baseball and football. Public play, if it is to be successfully introduced, must consider the peculiarities, characteristics, and idiosyncrasies of the people. To study these characteristics, etc., to receive suggestions with regard to them; is the present endeavor of the persons interested. As in everything else, the Germans proceed methodically and with thoroughness. The promoters of this movement are well aware that it will not do to imitate other nations without due regard to proper adaptation.

During the spring of 1890 a committee was formed in Görlitz in answer to a call from Mr. von Schenkendorf, member of the Prussian Diet, who gave expression to the general conviction. The committee addressed the mayors of all the German cities of over 8,000 inhabitants, asking them to state first what had been done in reference to the promotion of public play; second, what suggestions could be made for its immediate introduction. The officials of 273 cities replied, stating the local conditions and giving a description of the playgrounds. All expressed warm sympathy with the cause, and this inquiry alone sufficed to induce them to immediate action.

Perhaps the most tangible result the circular letter of the committee has had is the fact that in several cities philanthropic men have established public playgrounds, furnished them with the most approved implements and apparatus for play, such as swings and gymnastic apparatus, and endowed the institutions with a sum of money sufficient to defray the annual expenses for proper supervision and care. Public-school teachers are generally appointed supervisors of playgrounds which are

open after school hours. At other points the city authorities have set aside shady portions in city parks for playgrounds, and every zoölogical garden known in Germany is provided with a well-stocked playground for children.

The material gathered by the committee has been worked up, sifted, classified, and enlarged upon in a book by Mr. Raydt, entitled "German Cities and Public Play." The author and compiler is filled with great enthusiasm and has evidently studied educational questions and the bearings of physical culture. The work contains eight chapters; it begins with a statement of the value of play and bodily exercises, then gives an historic review of the development of play as far as historically known. The author also discusses the institutions of 34 cities where public play is encouraged and promoted by the city authorities. The replies received by the committee are either summarized or given in full. Manual training receives a good share of attention as a means of promoting hygienic conditions. In a concluding chapter, a number of warnings and suggestions are offered which deserve consideration. In order to make the work of the committee more practical still, a list and description of apparatus and implements is inserted with a statement of prices and sources of manufacture.

On May 21, 1891, the central committee for the promotion of juvenile and popular play in Berlin issued a circular soliciting means, suggestions, and advice.

IV.—EDUCATION OF NEGLECTED AND DEPRAVED CHILDREN IN PRUSSIA.

The Diet in Prussia on October 1, 1873, passed a law concerning compulsory education of neglected and depraved children which received the sanction of the crown. From the date of the passage of the law up to April 1, 1890, there were placed in "reform asylums or schools" 16,964 children. Of these 654 were discharged on condition, 4,559 unconditionally, 439 died, 447 escaped or were stricken from the roll for other reasons (not stated), so that on April 1, 1890, there remained 10,865 under surveillance. Of these 5,754 had been placed in families, 9 in State prisons, 982 in provincial and 4,120 in private reform asylums. The expenses for the entire number amounted to \$352,610 for the year 1889-90, which were borne by the state and the provinces in equal shares. The total expenses since the passage of the law, that is for twenty years, amounted to \$2,937,817. During the year 1889-90, 1,615 children were added, which is an increase of 10½ per cent. The following table is given to show to what extent the different provinces participated in this "forced education."

Provinces.	Number of children in 1890.	Number of children in—				Average expenses per child in—	
		Families.	State prisons.	City asylums.	Private asylums.	Families.	Asylums.
East Prussia	833	303	.....	.....	530	\$30.01	\$38.34
West Prussia	505	222	.....	205	78	18.75	56.25
City of Berlin	348	250	.....	75	23	58.86	71.42
Brandenburg	959	434	.....	198	327	56.61	46.32
Pomerania	753	372	.....	.....	381	26.93	46.96
Posen	432	285	5	56	86	30.14	33.25
Silesia	1,959	802	.....	299	858	40.90	52.64
Saxony	911	469	.....	148	294	26.64	56.04
Schleswig-Holstein	522	495	.....	.....	27	35.90	62.67
Laueuburg	7	3	.....	.....	4	42.50	90.00
Hanover	852	565	.....	.....	286	25.50	75.00
Westphalia	590	220	.....	.....	370	18.25	48.75
Hesse	627	489	.....	.....	138	30.00	45.00
Nassau	346	200	4	.....	142	32.85	52.08
Rhenish Prussia	1,216	645	.....	1	570	47.32	66.11
Hohenzollern	6	.....	.....	.....	6	35.00	36.50

V.—JUVENILE WAGE-WORKERS IN PRUSSIA.

The last annual report of the Prussian councilors of industry offers in tabular form a statement concerning the statistics of juvenile wage-workers of the year 1890. For many years the state did not consider it necessary to regulate juvenile labor by legal enactments, chiefly because the requirements and rigid enforcement of the compulsory school-attendance act made special laws against abuse of juvenile labor unnecessary. Since the compulsory-attendance law left much to the discretion of the supervisory authorities, who could adjust individual cases, the act had a stimulating effect upon the attendance at school, and at the same time checked abuse in utilizing the children for the purpose of earning money.

Only recently, or during the last ten years, that is, since the requirements of life in Germany have become so difficult to meet that poor families are obliged to call into play all the labor-power at their disposal, has it been found imperative to protect the growing generation by means of strict laws from excessive demands upon their bodily and mental strength. Still, considering that the supervisory authorities have always had a margin of discretionary power with reference to children from 12 to 14 years, the recent laws are by no means as specific as the English laws. Children of that age in many cases were excused from attending school half the time, and even for an entire year if the poverty of the parents was so great that it was a question of the family becoming a public charge.

Of course, there are good reasons why factory-owners should desire juvenile labor in preference to the labor of adults. Children work for very low wages and their fingers are more skilful for certain things than men's fingers. The same reason which opened the factories for women opened them for children. Competition which has become so fierce of late may be the life of trade, but it surely is the death of the growing generation. Of late the economic conditions of many localities in Germany (chiefly in the western portion of Prussia and in the king-

dom of Saxony) have become worse and worse, and poverty seems to grow at a great rate in industrial centers. These considerations have induced the authorities to investigate the subject of juvenile labor and to gather statistics upon which to base legislative action. The enactment passed in 1889 provides that no children under 13 years of age may be employed in factories and limits the number of hours of labor per day.

According to the statistics at hand there were in Prussia 19,275 factories in which juveniles were employed in 1890, which is an increase of 2,771 over 1888. The greatest number of factories employing juvenile laborers were those in which articles of food and drink are manufactured or prepared, to wit, 3,332; then follow the stone and clay industry, with 2,682 factories, and the textile industry, with 2,577.

The entire number of wage-earning juvenile laborers (between 12 and 16) working in factories in 1890 was 125,904 (an increase of 21,665 over 1888). While, according to the number of factories employing children, the textile industry is the third, that industry really takes the first place if the number of juveniles is considered, which is 26,572; the second kind of industry employing juveniles is the mining industry and iron and salt works, which employ 20,845 juveniles; there were also 16,620 metal-workers, and the factories in which articles of food and drink are manufactured or prepared had 13,442 juvenile laborers, while the stone and clay industry employed 12,807.

Among the 125,904 young people were 88,452 boys and 37,452 girls. The girls outnumbered the boys in the textile industry, with 15,648 against 10,924; also in the clothing and cleaning branch, with 2,641 to 1,140; while in the paper and leather industry the two sexes are about equally represented, 3,196 girls and 3,197 boys.

As was the case with the entire number of juvenile laborers (between the ages of 12 and 16), so the number of children (between the ages of 12 and 14) increased during the two years from 1888 to 1890 from 6,225 to 6,633. Children were most frequently employed in factories in which articles of food and drink are prepared, namely, 2,585; in the textile industry we find 1,079 children; in the stone and clay industry, 817; in mining, iron, and salt works, 408. As to sex, we find 4,209 boys and 2,424 girls among the factory children.

Several of the reports mentioned above emphasize the fact that the increase in the employment of juvenile laborers was in accordance with the increase in the total number of laborers previous to 1889, but that in 1889 and 1890 the increase in the number of young laborers exceeded the former ratio. This is owing to the industrial progress made during these two years and the consequent founding of new factories and opening of new branches of manufacture. But since the number of children in factories has not increased it is to be presumed that more young people between 14 and 16 years are engaged. In some places, notably in Berlin and vicinity, and in Frankfort on the Oder, a nota-

ble decrease in the number of wage-earning children has been found, owing to the new "labor-protection law" which prohibits the employment of children before they are 13 years old and permits that of children between 13 and 14 years only when they have completed their common-school course or have a permit from the supervisory authorities.

In the mining industry and in iron and salt works the ratio of increase of young laborers (14 to 16 years) is greater than the ratio of increase in the total number of laborers. While the latter was 7.8 per cent, that of the former was 13 per cent. In the mining district of Breslau (province of Silesia) the ratio of increase of young laborers was 38.6 per cent, while the whole number of laborers increased only 9.7 per cent. In the western districts, in Dortmund (province of Rhenish Prussia), for instance, the two ratios were 10.4 per cent and 10 per cent.

The occupations of these young laborers were in all cases light and suitable to their physical strength. The official reports state that the hygienic conditions of juvenile wage-workers show decided improvement and that the letter and spirit of the law are universally observed.

While this factory labor is accounted for in a manner satisfactory to the law and State authorities, there is another phase of the question of children employed as wage-workers which the law does not touch; it is the employment of children after school hours. A few striking though isolated cases which may shed light on the subject, have come to the notice of the press.

To what extent children are obliged to aid their parents in making a living in Germany may be seen from the following figures: The *Leipz. Zeitung* says: "A school principal in Altendorf, near Chemnitz, in Saxony, made minute inquiries among his 468 pupils and found that of 238 boys 69 (33.6 per cent) and of 230 girls 44 (19.8 per cent) were engaged after school hours in some occupation for which they received wages, 19 as messengers, 56 in factories, 11 in agriculture, 20 as domestic servants, and 7 in stores. The average number of hours of work was 6 and the average wages per week 1.14 marks (27 cents). The aggregate wages per year amounted to 6,696 marks (\$1,594). In the upper grade of the school not less than 61.2 per cent of the pupils worked for wages after school hours; in the second grade, 44.9 per cent." These statistics leave entirely out of consideration work performed at home. If that were counted in, the result in figures would be startling, since most of the parents of the pupils in the lower schools in Saxony are small mechanics or tradesmen who depend upon the services of their children to keep the wolf from the door.

"Recent statistical publications notice that out of 32,512 boys enrolled in the schools of Hamburg, 3,546 were engaged in occupations outside of their home after school hours from 2 to 6 hours a day, while 647 were busy in some occupation at home from 6 to 11 hours. Out of 32,310 girls, 1,515 were engaged outside of their home up to 6 hours

and 500 at home up to 5 hours. These are frightful facts and give evidence of much poverty and misery. Think of a boy who works for wages 11 hours and attends school 6 hours. That leaves him 7 hours for recreation and sleep, day after day."

These facts show the thrift of the German laboring classes, it is true, and may be caused by fierce competition, but no nation, not even the phlegmatic, sturdy German, can stand the constant undermining of physical strength which must inevitably result from this early employment of children as wage-workers.

VI.—SCHOOLS OF THE KINGDOM OF SAXONY.

[Source of information, "Zeitschrift des K. Sächsischen Statistischen Bureaus:" Jahrgang, 1890; Heft I and II. (Dresden, 1891.) Saxony: Constitutional kingdom; population, 3,500,513 in 1890, according to census of December, 1890; area, 5,856 square miles; capital, Dresden; Minister of Public Instruction, von Seydewitz.]

INTRODUCTION.

Saxony has not, like other countries, published comprehensive annual statistics of its schools, chiefly because the educational institutions of the Kingdom belong to the administration of different governmental departments, such as agriculture, education and religion, public works, etc.

Not until the year 1890 did the Official Statistical Bureau publish the statistics of schools. This first attempt at showing comprehensively what Saxony does in educational matters is exceedingly interesting, pointing out, as it does, that no other country in Germany has such a multiplicity of educational institutions or has progressed farther than Saxony, which in area is not quite as large as the States of Connecticut and Rhode Island, the latter-named States having 6,240 while Saxony has 5,856 square miles.

SUPERIOR INSTITUTIONS.

According to the official report mentioned, Saxony had on December 2, 1889, five institutions for superior instruction, namely, the *University at Leipzig*, the *Polytechnicum at Dresden*, the *Veterinary High School at Dresden*, the *Mining Academy at Freiberg*, and the *Forestry Academy at Tharandt*. These five institutions are classed among the universities. They had 2,417 students and 272 professors, ordinary, extraordinary, and special. The total expenditures amounted to 2,219,332 marks (\$554,833), of which sum the state contributed 1,562,111 marks (\$390,528), 70.5 per cent.

SECONDARY INSTITUTIONS.

The Kingdom had, in 1889, 58 secondary schools for the purpose of general culture and preparation for superior institutions. These schools

had 958 teachers and 14,439 pupils. These secondary schools may be classed as follows:

"Gymnasia" (classical high schools).....	17
"Realschulen" (modern high schools).....	21
"Realgymnasia" (schools that attempt to be both gymnasia and realschulen)....	10
Academies for girls	2
Private schools (offering secondary instruction)	8
Total	58

A comparison with former statistics shows that the number of gymnasia has steadily increased, while the number of realgymnasia has decreased; naturally the attendance of pupils decreased accordingly. During the last year, however, this hybrid form again increased, both in number and attendance.

Regarding the number of graduates of gymnasia of and realgymnasia it may be stated that the latter class has very materially decreased, owing to the fact that the diploma of a realgymnasium offers smaller privileges in comparison with the diploma of a gymnasium. The graduates of gymnasia have by far better chances, both in professional and other occupations, hence the result.

The gymnasia, on the other hand, have a greater number of graduates than ever before, so that the total number of graduates not only has not decreased, but has increased. The total expenditures for gymnasia, realschulen, and realgymnasia were—

Year.	Total expenditures.		State subsidies.	
	Marks.	Dollars.	Marks.	Dollars.
1876.....	2,590,035	647,506	765,117	191,279
1877.....	2,704,675	676,166	709,137	177,284
1880.....	3,096,148	774,037	829,689	207,422
1884.....	3,186,482	796,121	952,488	238,122
1888.....	3,789,522	947,381	1,278,632	319,658

From this statement it is plain that the increase of state subsidies is greater than the increase of the share of the expenditures which was borne by the communities. The ratio of increase of the total expenditures from 1876 to 1888 was 42.5 per cent, while that of the state is 62 per cent.

The *normal schools* in Saxony are classed among the institutions for secondary instruction, although they are purely professional. Saxony had, in 1889, 19 normal schools, with 2,475 pupils, of whom 1,916 lived in dormitories attached to the school. The number of teachers and professors was 267, of whom only 10 were special teachers. Comparing the numbers with those of the year 1884, we find an increase in the number of students, owing, no doubt, to the increased demand for teachers in the elementary schools. In 1889 the number of students was 157 larger than in 1884. While this would seem to indicate a healthy state of affairs, another fact proves the contrary, namely, the

great decrease in the number of candidates for positions in the lower schools. This is attributed to the fact that, while prices of commodities as well as other things contributing to comfort and luxury have greatly increased during the latter years all over Germany, the salaries have remained stationary. The sum total of expenditures for normal schools was 1,124,646 marks (\$281,162), of which the state paid 1,037,862 marks (\$259,466).

Besides these normal schools, Saxony has a special normal school for gymnastic teachers. In 1889 it had 12 students, all of whom were teachers on leave; 9 received diplomas.

The Royal Stenographic Institute at Dresden is also classed among the secondary schools. This school of 9 teachers offers both elementary and secondary courses. In the winter of 1889-90 the elementary course had 71 students, while the secondary, which prepares for parliamentary shorthand and newspaper practice, had 18 and 86 respectively. The number of diplomas granted, however, was only four.

ELEMENTARY SCHOOLS.

During the year 1889 Saxony had 4,251 institutions that may be classed as elementary schools. The great majority of these were public (or people's) schools, namely, 4,139, including 1,934 continuation schools (post-graduate courses). There were also 90 private or endowed church schools, 2 schools for deaf mutes, 4 blind asylums, 5 asylums for orphans and weak-minded children and 11 reform schools. The sum total of pupils in these elementary schools was 664,640, of whom 578,794 were pupils of public schools (exclusive of continuation schools); 952 children were taught at home by private teachers and governesses, 265 in number.

The number of public schools was 2,205, of which 22 were exclusively boys' schools, 27 girls' schools, and 2,156 schools in which both sexes were taught. Hence the ratio was 1 per cent boys' schools, 1.2 per cent girls' schools, and 97.8 per cent mixed schools. Of the latter 4.8 per cent had separate classes for boys and girls throughout, 11.6 per cent had the sexes separated in a few classes only, and 81.4 per cent were mixed throughout. Hence, in only 415 of all the public schools was coeducation practiced. But this does not state the case correctly, for these mixed schools are chiefly small ungraded schools in villages and small towns; in larger towns and cities the sexes are separated. Of 578,794 public-school pupils there were 284,033 boys and 294,761 girls. Of the boys 42.6 per cent were taught separately, and of the girls 42.8 per cent.

Classifying the public elementary schools of Saxony according to their courses of study we find that 1,985 (or 90 per cent) were simple elementary, 208 (or 9.4 per cent) intermediate, and 12 (or 0.6 per cent) higher elementary schools (schools offering secondary instruction).

The grading of pupils has progressed in Saxony much farther than in Prussia. The statistics of 1889 show that the schools of 2 and 4 grades or classes still predominate, but that the number of better organized and graded schools is on the increase. Of the total number of schools 39.8 per cent were schools of 2 grades or classes; 6.5 per cent had 3 classes; 23.5 per cent had 4 classes; 2.5 per cent had 5; 12.1 per cent had 6; 8 per cent had 7; 7.6 per cent had 8 or more grades or classes. Regarding the attendance, it shows that schools of 2 and 3 classes, although nearly one-half of all the schools, contain only 15 per cent of all the pupils; hence, that 85 per cent of the pupils are in schools of 4 or more grades, and that nearly one-half of all the pupils attended schools of 7 or more classes. These are certainly very favorable conditions. Another interesting piece of information is found in the chapter devoted to the average number of pupils to the teacher; in simple elementary schools, the average number of pupils to the teacher was 47 (in Prussia the law makes it 75); in middle public schools the average number was 40, and in higher public schools it was 26.

In regard to the daily attendance the notable fact has been discovered that the better a school is organized, that is to say, the better graded it is, the greater is the average attendance. It was found that the daily attendance in schools of but two or three classes fell somewhat below the expected average, while it surpassed the average in fully graded schools. As is the case in nearly all countries of Europe, the daily attendance is not computed from the teacher's daily register, but the attendance on two test days is taken. On these days it was found that the total number of teachers was 10,102, namely, 7,689 men and 2,413 women. Among the latter, however, were 2,203 women who taught only needlework a few hours a week, and were not regularly licensed teachers. Deducting these, we find that only 210 women were licensed teachers in Saxony; hence that the total number of teachers was 7,899.

In regard to the position of the teachers the following item is not without interest: There were, in 1889, 266 rectors, or principals of buildings, who either did not teach or who taught only an hour per day; 6,028 regular teachers, excluding special music, drawing, and gymnastic teachers, 1,353 assistant teachers, 86 special teachers, and 166 substitutes. These 7,899 teachers taught altogether 12,918 classes, hence the number of teachers actually needed was 5,019 short.

Of the total number of teachers 7,570 had received professional training in normal schools, 215 in universities; 114, chiefly women, had obtained their diplomas after private preparation. Only 6,966 were born in Saxony, 894 in other parts of Germany, 39 were foreigners, 7,770 belonged to the Evangelical, 126 to the Catholic, and 3 to the Reformed Church. Concerning other items, such as length of service, salaries, etc., the official report gives no information, but other sources of information at the disposal of the Bureau make it appear that the salaries of teachers are somewhat higher than in other

parts of Germany. But since this information comes chiefly from large cities and refers only to conditions in those cities, it would be unwise to take them as a basis for an average. The official report promises extensive information on this and similar points of school organization for next year.

CONTINUATION SCHOOLS.

Regarding continuation schools it may be mentioned that 1,912 of them (among which were 13 exclusively for girls) were in organic connection with public elementary day schools, while 22 (among which were 3 for girls) had an independent organization. In 1,117 of these institutions (among which were 21 independent) school was kept all the year round; in 712 only during the winter. In the remaining 105 institutions instruction was interrupted for some months during harvest time. In 1,596 of the continuation schools instruction was given on week days; in 195 on Sundays only; in 153 alternately on week days and Sundays. The entire number of pupils who attended continuation schools was 75,938, namely, 74,659 boys and 1,279 girls.

The current expenditures in 1889 *for all public elementary schools* in Saxony (including continuation schools) was a little more than 18 million marks (\$4,500,000), cost of erecting buildings not included. This shows a per capita of school population of 28 marks (or \$7) and a per capita of the entire population of 5.10 marks (or \$1.22). The communities paid 53 per cent for the maintenance of public schools, the state 8 per cent; 28 per cent were raised by tuition fees, and 11 per cent were defrayed from the interest of irreducible funds, bequests, fines, etc., generally termed miscellaneous sources. In the share of the State mentioned (8 per cent) there is not included what the State pays for teachers' pensions, widows and orphans' support, etc., which expenditures amounted to 880,000 marks (or \$220,000).

SPECIAL SCHOOLS.

Besides the schools that offer elementary and secondary instruction for general culture, there were in 1889 in Saxony a great number of special schools, to wit, 87 institutions for industrial education, which may briefly be called professional or trade schools, and 28 industrial continuation schools. Many of these institutions are of recent origin. Of the former 35, and of the latter 11, have been established during the last 10 years. Of the older ones, 12 date their establishment back before 1840, hence have now a history of half a century; 5 were founded between 1840 and 1850, 12 between 1850 and 1860, 8 between 1860 and 1870, and 15 between 1870 and 1880. The greatest number of industrial schools, as compared with the population, is found in the district of Zwickau, owing to the fact that that locality has a great variety of industries carried on in factories and large and small workshops. The large industrial centers also support many of these special schools.

Their founders and supporters here, as well as in other parts of Saxony, are societies and labor unions, while the communities hesitate to establish and maintain them. The state, on the other hand, vies with private enterprise in the establishment and maintenance of special or trade schools; and besides maintaining state schools it liberally subsidizes private schools.

In strict accord with the increase in the number of special schools during the last 10 years, the number of pupils increased. During the last 5 years the number of pupils in these industrial schools increased from 5,202 to 7,618, and that of industrial continuation schools from 4,751 to 7,912 pupils. This phenomenal increase is attributable, in a measure, to the fact that the communal school authorities in some districts have made attendance at industrial continuation schools compulsory; partly, also, owing to the resolutions of some labor unions which make attendance at such schools a condition of admission to the privileges of the unions. "From the attendance at these special schools," says the official report, "it may be surmised that the prejudice against special industrial or trade schools is giving way to the idea that a thorough professional education alone can aid the tradesman in his struggle for life."

The expenditures of special or industrial schools in 1888 was 629,471 marks (or \$157,368), or 83 marks (about \$21) per capita. The industrial continuation schools cost 100,155 marks (or \$25,040), or 13 marks (about \$3.25) per capita. Of these sums the state defrayed 52 per cent for the special schools and but 19 per cent for the continuation schools.

Compare these figures:

	State appropriation.	Tuition fees.	Communal funds.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Special industrial schools	52	23	25
Continuation schools	19	44	37

In order to place the above facts concerning industrial and special schools in proper relief it may again be mentioned that Saxony covers little more area than the State of Connecticut, and that it has a population of 3,500,513.

OTHER SPECIAL AND PROFESSIONAL SCHOOLS.

A statement of the educational efforts of the kingdom of Saxony would be incomplete, if art, commercial, and agricultural schools were not mentioned. Saxony has 12 art institutions (such as art academies for painting, sculpture, and decoration), 9 agricultural and horticultural, and 32 commercial schools. They had together 7,179 pupils. Exclusive of academies of music and schools of dramatic art, the three kinds of special schools above-mentioned required an expenditure of 781,629

marks (or \$195,407), of which sum the state defrayed 46 per cent. All these institutions, except those for music and the dramatic art, are intended for and frequented by young men almost exclusively. In consideration of the obvious fact, that in consequence of the changed social conditions women have acquired a much more extended sphere of usefulness than formerly, the state recognizes, much less than does society itself, the urgent necessity of establishing special schools for women. This is seen from the statement that of the 11 professional schools for women, only 5 have been established by societies, and 5 owe their existence to private enterprise, while only 1 is a state institution. These 11 schools were frequented by 1,081 young ladies (an average of 98 to the institution). The source from which these items were drawn gives the total expenditures for only 9 of these schools, namely, 72,555 marks (or \$18,139), of which the state contributed 9,500 marks (or \$2,375).

CONCLUSION.

The foregoing facts disclose a very interesting picture of the educational affairs of a small part of Germany. They show that the royal government of Saxony is fully alive to the urgent demands of modern society; that it fully comprehends the importance of the fierce struggle for subsistence going on in Europe, both among states and individuals. Saxony has a greater variety of educational institutions than any other state in Germany, and, indeed, in Europe.

Statistical summary.

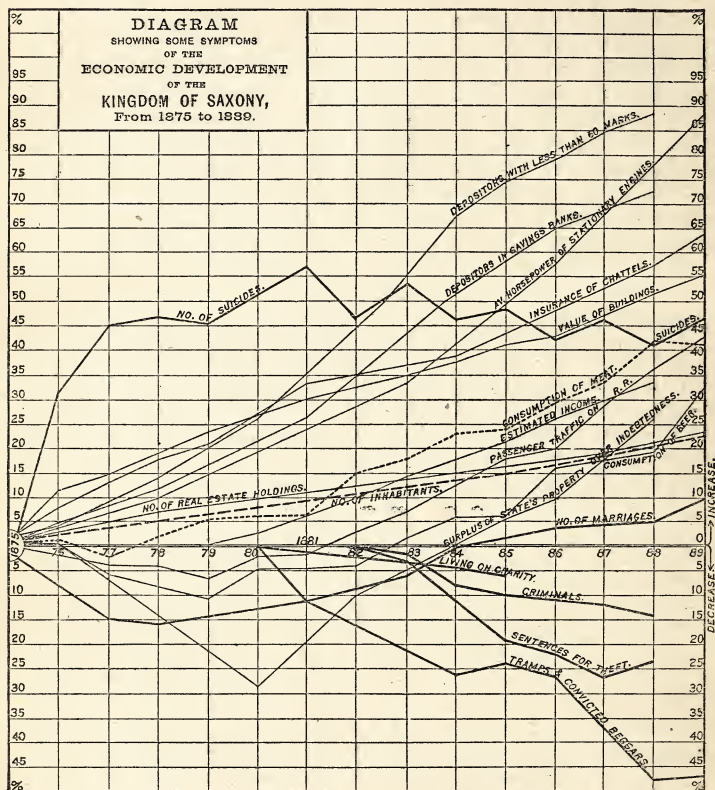
Institutions.	Number.	Teachers or professors.	Pupils or students.	Total annual expenditure.	Per capita.	State's share of expenditures.	Ratio of —			
							State.	Community.	Tuition fee.	Funds.
							<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
Superior instruction..	5	272	4,217	\$554,833	\$230.00	\$390,528	70.5	.....	29.5	
Secondary schools	58	958	14,439	947,381	65.65	319,658	34.0	.....	66	.....
Normal schools	19	267	2,475	281,162	113.60	259,466	92.0	.....	.....	8
Elementary schools:										
Public	2,205 ^a	7,899	578,794 ^b	4,500,000	7.00	360,000	8	53	28	11
Continuation	1,934 ^b		75,938 ^b							
Parochial and private	90	593	6,732	(?)	(?)	None.	.....	.....	(?)	(?)
For defectives	11	115	1,056	(?)	(?)	(?)	100	.....	.....	.....
Reform	11	24	2,120	(?)	(?)	(?)	100	.....	.....	.....
Total			664,640							
Industrial and trade schools	87	458	7,618	157,368	21.00	81,831	52	25	23	.....
Industrial continuation schools	28	316	7,912	25,040	3.25	4,757	19	37	44	.....
Art schools	12	242	3,288	83,130	25.00	70,970	92.5	.....	.....	7.5
Commercial schools	32	184 ^b	7,179	195,407	27.03	89,887	46	54		
Agricultural schools	9	76 ^b								
Special schools for young ladies	11	81	1,081	618,139	17.00	2,375	13	87	.....	.....
Military schools	3	39	789	(?)	(?)	(?)	.....	.....	.....	.....

^a Plus 2,203 women who teach needlework twice a week.

^b Expenditures for only 9 of these 11 schools stated.

VII.—ECONOMIC DEVELOPMENT OF THE KINGDOM OF SAXONY, GERMANY, FROM 1875 TO 1889.

[Official statistics from the Royal Bureau of Statistics, Dresden.]



EXPLANATION OF THE GRAPHIC STATEMENT.

The national economy of the Kingdom of Saxony, between the years 1875 and 1879, may be studied from some symptoms presented in the diagram attached. The year 1875 is taken at the point of zero. Twenty-one symptoms of prosperity are enumerated. Several curves which sink below the medium line indicate the period of decreasing prosperity that followed in the wake of the great panic which swallowed up millions of dollars and checked the increase of wealth, comfort, and virtue. In particular, the lines indicating the number of marriages, consumption of beer and meat, travel and freight business on railroads, surplus

of state property over indebtedness, sink below the figures known for 1875. But all these lines curve upward again before the year 1880 is reached. The other positive momenta of prosperity in the diagram do not show a downward curve, but even these indicate by their slow increase that they were affected by the great calamity.

Of the negative momenta only one dates back to 1875, to wit, that of the number of suicides. The other four are (a) the number of people dependent upon charity; (b) the number of criminals in general; (c) the number of sentences for theft; (d) the number of tramps and beggars. These numbers show a rapid decline, in accordance with the well-known fact, that in time of general prosperity crimes against property decrease in number, and are offset by the number of crimes against the person and the state.

The following is a tabulated statement:

INCREASE.		Per cent.
Number of inhabitants from 1875 to 1880	23	
Number of marriages	10	
Number of real estate holders	24	
Consumption of beer	32	
Consumption of meat	41	
Surplus of state property over indebtedness	26	
Estimated income	34	
Passenger traffic on railroads	42	
Freight traffic on railroads	44	
Cases of suicide	46	
Value of buildings	55	
Insurance on chattels	63	
Number of depositors	72	
Number of depositors with less than \$15	88	
Average horse power of stationary engines	88	
DECREASE.		
Number of people living on charity, 1880 to 1885	6	
Number of convicted criminals	13	
Number of convicted thieves	24	
Number of tramps and convicted beggars	47	

Like the negative, the positive momenta signify throughout a gradual improvement of the economic conditions since the year 1880. This is especially obvious when we examine the number of marriages, which had in 1884 again reached the number that were reported in 1875.

Better results even are obvious when we observe the estimated income of the population and compare this with the curve illustrating the consumption of meat and beer. Another symptom of prosperity is found in the increase of railroad traffic, and the rapid increase in the use of stationary steam engines, which signifies an increase in manufactures. Saxony being essentially a manufacturing country, this symptom is well chosen. Equally incontrovertible as a symptom of prosperity is the curve that signifies the rising value of buildings and the

increase of insurance on chattels, both lines showing an almost parallel tendency. More decided even than the foregoing are the lines that show the increase in thrift. The two lines, to wit, the one showing the number of depositors, and the other the number of small depositors, people of very small means, prove a very happy state of affairs.

Finally, the graphic presentation enables us to see that the positive momenta of prosperity curve upward, and the negative downward in a much greater degree than does the population curve.

It seems unnecessary to burden these reflections with facts embodied in figures; they are minutely stated in "Zeitschrift des K. Sächsischen Statist. Bureaus," Jahrg. 1890, Heft I and II.

VIII.—SCHOOL-GARDENS.

[Sources of information, "Volksschulgarten und Volksschulhaus" by Dr. J. D. Georgens, Berlin; also "Kölnische Zeitung" No. 1051, 1891.]

As early as the beginning of the fourteenth century there were found in a few cities of Italy (for instance, in Salerno and Venice) institutions in which plants from all the parts and climates of the world were raised or cultivated for purposes of education and the enhancement of science. However, these institutions, called *botanical gardens*, did not come into general use until natural science experienced the revival that astonished the world by its suddenness and brilliant results. The wealthy cities of Italy, led by Ferrara, vied with each other, early after the revival, in establishing such gardens. The universities of France and Spain followed this example. It is true, the establishment of a botanical garden in Paris, at the close of the sixteenth century, had its cause in the trivial desire to furnish new floral designs to the embroiderers of court gowns. Not until 1626 was the garden transformed into an institution for scientific purposes, in which most plants of the world were raised. Later it received the name "Jardin des Plantes." Also in Germany a lively interest in botanical gardens was manifested during the closing decades of the sixteenth century. Their establishment was usually contemporaneous with the foundation of universities. At present no German university is without a botanical garden that furnishes the material for instruction in botany, biology, and physiology, and is frequently also used as an experimental station for raising and cultivating agricultural plants.

In view of these facts it seems curious that it did not occur to any one to demand such gardens for lower schools. The first who expressed the idea was *Comenius*, who said that every school should have a garden in which "the pupils may let their eyes 'graze' by watching the trees, flowers, and herbs." He recognized in the school garden a means of awakening and promoting the desire for knowledge. *Pestalozzi* also, enthusiastic as he was for youth and school reform, demanded that the young, purely for purposes of education, should be occupied in field

and garden. *Fröbel* laid much stress upon having gardens for the infants' pleasant occupation. He even termed his institutions for infants, *Kindergärten* (children's gardens). But the school garden as a means for instruction in horticulture, agriculture, and natural history (chiefly botany) in the lower schools, is an idea of rather recent origin, and one that is not well understood even at the present day.

Sweden, of all civilized countries, is the one in which the school garden is found in general use. The leading authorities in that country have recognized the fact that the elementary school may lend its aid in upbuilding national wealth by offering practical instruction in some branches of horticulture and agriculture. Sweden had, in 1876, 1,602 school gardens; in 1881 this number had increased to 2,000. At present it is safe to say that there is scarcely an elementary school in Sweden without a garden.

In *Belgium*, a country which, aside from a great number of industrial pursuits, depends upon agriculture to a great degree, agricultural and industrial associations, as well as the government, have devoted much attention to school gardens for several years, and paid considerable subsidies to the promoters of these institutions. The considerable wealth of the rural population of Belgium arises from the cultivation of vegetable gardens for the markets of the numerous cities of that densely populated country, a state of affairs which is chiefly attributable to the establishment of school gardens and the systematic and practical knowledge gained in them by the children.

Also in *France* the idea of providing country schools with gardens has found a fertile soil, especially since 1885, when the minister of agriculture suggested and promoted the introduction of instruction in agriculture in the primary schools.

In *Switzerland* the National Agricultural Association took the establishment of school gardens in hand and displayed much zeal. Its efforts after several years were crowned with noticeable success. This led the Federal Government in 1885 to appropriate the sum of 3,500 francs (\$700) partly for plans to be submitted for consideration, partly for the maintenance of a few gardens already in existence. Since then the annual federal appropriations for maintaining school gardens have increased, and in 1888 sixteen communities of Switzerland had well arranged and regularly used school gardens. The movement is still growing in importance as its beneficial influence upon the wealth of the communities is demonstrated.

While Sweden in its school gardens aims chiefly at promoting agriculture, and Belgium and France aim at the culture of fruit trees and vegetables and also floriculture, in Switzerland this utilitarian view has been kept in the background and pedagogical considerations have dictated both the establishment and management of these gardens. They are intended in country schools of Switzerland partly to give the children theoretical knowledge of the culture of the plants most important for

human life, such as medicinal and food plants, partly to afford practical exercises in the rational culture and treatment of plants, partly also to awaken the sense for horticulture and floriculture and habituate to order and floral ornamentation, and, lastly, to aid the instruction in botany.

Austria, it may be said, treats the question from a more general and higher standpoint. The imperial law of 1869 introduced instruction in agriculture into the normal schools and ordered the establishment of school gardens for every country school. A ministerial order of August 20, 1870, decreed that the instruction in natural history in the people's or elementary schools should be given in connection with practical exercises in the school gardens. This made the establishment of such gardens a necessity, and at present there are more than 9,000 school gardens in operation in Austria and more than 8,000 in Hungary. Of course they are found chiefly in villages and in the country, not in the cities. The result of this movement in Austria has been most gratifying. The development of flourishing orchards in Bohemia and Moravia, with their world-renowned wealth of fruit, for instance, is directly traceable to the introduction of practical instruction in the school gardens.

In the *German Empire* the two States of *Bavaria* and *Oldenburg* especially have done much toward encouraging the practical teaching of agriculture, horticulture, and floriculture by establishing school gardens. *Prussia* has taken only one step, but that was taken nearly a hundred years ago. Instruction in the culture of fruit and forest trees was introduced into the normal schools, and the teachers have acted ever since in the light of their early training. It is reasonable to say that the admirably managed forests and vast orchards of Prussia owe their existence and excellent yield in no small degree to the unostentatious influence of the country schoolmaster, who teaches both his pupils in school and the adult villagers in agricultural clubs. In these clubs the teachers are the moving spirits who teach new methods of procedure, furnish the members with new ideas for rational culture of soil and plants, and generally act like benefactors in disguise. But school gardens, such as are recently suggested, are not numerous in Prussia as yet. The botanical gardens of the large cities in Prussia are obliged to furnish the teachers of secondary schools with the required numbers of specimens of plants and parts of plants for instruction in botany. But that does not seem to reach the elementary schools in the cities and the country. No statistical data of school gardens in Prussia are at hand.

Now, if we consider that the knowledge of botany, of the structure, growth, and treatment of plants, can not be learned from books, any more than chemistry can be learned from the printed page, or arithmetic without a blackboard or slate and paper, it becomes evident that a school garden, even if it be only a modest flower bed, is necessary. Botany has ceased to be a mere conglomeration of names (and Latin

names at that) and a classification according to artificial systems. Botany is now taught according to biological principles, which require close observation of processes and conditions. Hence a school garden is a requisite of a good school. Again, so the German promoters of the establishment of school gardens argue, if we consider that the conditions of modern times are particularly exacting, and that competition becomes fiercer as population increases; that more than ever before life requires wise economy and prudent utilization of the means of support; that all the other occupations rely upon successful agriculture in the state; that the state will always depend upon a healthy, well-to-do, and prudent agricultural population; that the industrial population is directly aided by the state by means of institutions such as special technical schools, and by the introduction of manual training into the lower schools; if, lastly, we consider that it is most desirable to habituate youth to methods of order and thrift, qualities absolutely requisite in agriculture, it becomes manifestly necessary to provide the means for bringing about these conditions. The school garden is as necessary to a school as a black-board in the classroom.

The æsthetic side of education also would be directly benefited by lessons in the school garden. The love of nature and natural processes of growth, and the development of forms, and the power to see a life's vocation in the care of nature's creations and products, these are matters to be learned; children must be habituated to them. The shortest way to that end is through the school garden.

It is plain that local conditions and requisites will modify the general plan, if a plan should ever be prescribed; only this principle must be adhered to: The school garden must not be regarded as a mere appendix to a school, but as a worthy member of an organism. Hence it is desirable to assign regular lessons for every week to some work in the garden. In regard to the general character of the garden it is suggested that it should neither become a botanical garden nor an orchard exclusively. It should assume the model of a well-managed home garden, stocked with fruit trees, vegetables, and flowers.

In the United States we frequently find the schoolhouses surrounded by spacious grounds that afford ample room for flower beds, shade and fruit trees, and not unfrequently we find that teachers, inspired by Froebellian principles, apply a certain space of the grounds for object lessons in elementary botany. But the idea of having a school garden as a necessary complement of every elementary school is not generally entertained, although no country would be better suited to the introduction of school gardens, space and means being available in greater abundance than in any European country.

CHAPTER X.

THE HIGHER SCHOOLS OF PRUSSIA AND THE SCHOOL CONFERENCE OF 1890.¹

PREFACE.

The following paper has been prepared for the purpose of indicating the recent movements in education in Prussia so far as they refer to the higher schools. The common schools on the one hand and the universities on the other have been mentioned only incidentally. While the other German states have been referred to only for purposes of comparison, the differences between the various systems are not so great as the similarities, and the same movements that have been stirring in Prussia have been felt, and quite as keenly, throughout all Germany.

An effort has been made to present a summary of the origin, development, and especially of the present organization of secondary education in Prussia; to show the intimate relation of the educational system to the national life; to reflect the current thought of the people on the higher schools, and to describe the agitation for reform that culminated in the conference held in Berlin, in December, 1890. The scene therein presented of the most powerful monarch in the world addressing an assembly of schoolmen on the details of school management, must be regarded as one of the most striking and remarkable episodes of educational history.

While accuracy has been sought in all the facts given, the treatment is purposely descriptive. So far as possible the German technical terms have been rendered into their nearest corresponding English equivalents, without too great regard to literalness of translation. It will be necessary in reading the body of the paper to bear constantly in mind the distinction, the very sharp distinction, that the Germans make between "*Erziehung*" and "*Unterricht*," that is to say, between education in its truest and broadest meaning, and mere instruction and learning. I have in general used the word "education" to express the former, and "instruction" for the latter; but where education is used in this

¹ Prepared for the United States Bureau of Education, by Charles Herbert Thurber, A. M., of Cornell University.

sense the reader must not forget that the German means nothing less than the total development of the child.

A brief list of authorities is appended. There is little literature in English on this subject, and of course none on the recent reform movements, except newspaper clippings. A complete bibliography of all the pamphlets, brochures, and works of more pretension that have recently appeared in Germany on different phases of the school question would in itself require almost the space afforded by this chapter.

- I. The higher school system in Prussia.—The schools.—Historical sketch.—Administration and organization.—General features.—The gymnasium.—Programme of the Gray Cloister Gymnasium, Berlin.—Courses of study of the Gray Cloister Gymnasium.—Real schools.—The real gymnasium.—Programme of the higher real school, Luisenstadt.—Programme of the real school in Potsdam.—Programme of the Sophia real gymnasium.—Programme of the first higher burgher school, Berlin.—Vacations.—Privileges.—Final examinations.—Gymnastics.—Teachers.—Examinations.—Trial year.—Appointments.—Material conditions.*
- II. The reform agitation.—General sketch.—Questions of external relations.—Internal questions.—Dr. Preyer's address.—The new German school.*
- III. The conference of December, 1890.—Preliminaries.—Members of the conference.—Order of business.—Questions submitted to the conference.—Theses of the referees; Dr. Göring's views.—Opening of the conference; address of the minister of education.—Address of the Emperor at the opening of the conference.—Impressions produced by the address of the Emperor.—Debate on question 2.—Second session; continuation of the debate on question 2.—Third session; continuation of the debate on question 2.—Debate on question 3.—Fourth session; continuation of the debate on question 3.—Sixth session; debate on question 7.—Seventh session; debate on questions 8 and 9.—Debate on questions 11 and 12.—Address of the Emperor at the close of the conference.—Cabinet order read at the close of the proceedings.—Reform committee.—Decisions of the conference.—Observations on the proceedings of the conference.*
- IV. Subsequent proceedings.—Views of a leading educator.—Changes in the cadet school.—Attitude of the educational administration.—Attitude of the Association for School Reform.—Action of the city of Frankfurt.—Action of the Association of Saxon Engineers and Architects.—Debate in the committee on education of the Chamber of Deputies.—Remarks of Dr. von Gossler's successor.—Effects on attendance.—Action to be taken by the Government.*
- Appendix.—Programmes of the higher schools of Prussia, Bavaria, Württemberg, Saxony, and Baden.—Authorities.*

I.—THE HIGHER SCHOOLS OF PRUSSIA.

Historical sketch.—In Prussia, as in all other European states, education was at first the concern of the church. Signs of this early intimate connection of the school and church still survive—for example, the combination of educational and religious affairs under the direction of one minister (the minister for educational, spiritual, and medicinal affairs), and the teaching of religion in all the schools. Various princes issued decrees expressing their individual wishes in the sphere of education, and as early as 1552 Joachim II formed a consistory to have a general oversight of church and school affairs. Johann Georg in 1573 issued a visitation and consistorial order in which minute instructions were given for the instruction in the schools and for the direction of the

teachers. The supervising officials were the clergy, at the head of which was the consistory composed of four or five members, the chairman of which was the general superintendent. They were charged with traversing the provinces and visiting churches and schools. Ten years were allowed for the circuit of each province.

The consolidation of Prussia and Brandenburg and the erection of the state into a Kingdom made a somewhat more centralized administration possible. Frederick the Great declared that education was the hobbyhorse of his old age, and he called Baron Zedlitz to carry out his wishes. Many important measures were introduced, the chief one being an order relegating the examination for fitness to enter upon university studies to the preparatory schools. Up to this time, however, a very general freedom had prevailed in school matters, and the central control was more nominal than real. Frederick William I was the first to claim the right of the state to issue binding regulations for the school system and to control their execution. The *Allgemeine Landrecht* (common law), issued under Frederick William II in 1794, declared the public schools to be state institutions, and contained among others the following legal regulations:

(1) All public schools and educational institutions are under the immediate control of the state.

(2) No one shall be refused admission to the public schools on account of his religious belief.

(3) New teachers can not be engaged nor considerable changes made without the consent of the provincial school officials.

(4) Persons of wide knowledge, good morals, and good powers of judgment must be chosen as supervising officials.

(5) Teachers in the gymnasia and other high schools will be regarded as officials of the state.

That school system which has made Prussia great and has attracted the attention of the civilized world dates from the darkest days of Prussian history. It was after the battle of Jena, when her chief university had been closed by the Corsican conqueror, her army practically annihilated, her very existence as a state threatened, her people exhausted and disheartened, that Prussia, with a heroism and steadfastness perhaps never equaled in history, looked her ruin in the face and began seriously and steadily to rebuild the structure of her former greatness. The summons to a nation sunk in selfishness and crushed beneath foreign oppression came from the philosopher Fichte in his address to the German nation. "No man, no God, and no event in the range of possibility," said he, "can help us, but we must help ourselves if we are to be helped. The way to salvation consists in building up an entirely new common national self in the bringing up (*Erziehung*) of a nation whose former life is extinguished to a wholly new life. In a word, a complete revolution of the former system of education is what I propose as the only means of preserving the German nation in

existence." Fichte's words fell like the voice of inspiration upon the ears of the despairing and exhausted people. The King, Frederick William III, said August 10th, 1807, "the state must make good through intellectual power what it has lost in physical strength." In 1808 the Higher School College, which had previously had the direction of educational affairs, was abolished and the duties of the same were transferred to the department of the interior as the third section, "for religious and public instruction." Count Dohna was made the head of the ministry and Wilhelm von Humboldt was called to take charge of the third section. His plans for reorganizing the school system were most extensive and far reaching. His three greatest reforms, however, were the state examination for teachers, the reorganization of the course of study, and the final examination. Although Humboldt remained but for a year and a half at the head of this department, he gave to the school system of Germany a form which it has never lost and to education an impetus which is still felt. The changes since his time have been part of an organic growth and progressive development.

Administration and organization.—Prussia has no code of public instruction. In addition to the declaration made in the common law of Frederick II (see above) the constitution of 1850 has the following:

For the education of the young special provision is to be made by means of the public schools.

Everyone is free to impart instruction and to found and conduct establishments for instruction when he has proved to the proper authorities that he has the moral, scientific, and technical qualifications requisite.

All public and private establishments are under the supervision of authorities named by the state.

This constitutes the basis in the common law of the school administration.

In 1817 the department of education was raised to the rank of a ministry. The administration of religious affairs was at first combined with education, later medicine was added, so that now the full title of the minister is *Minister der Geistlichen, Unterrichts-und Medicinalangelegenheiten* (minister of spiritual, educational, and medicinal affairs).

Humboldt joined with him two technical councillors, which number has now grown to eight, and they, with the minister and the under secretary of state for the department, constitute the central authority for the affairs of education. Prussia, however, enjoys considerable local self-government in educational matters. It was under Humboldt that profitable relations were first established between the central authority and the local governing bodies. Previous to his administration the central authority had been more nominal than real.

In 1808 the districts of Prussia received the name of *Regierungen*, or governments, and in each of these was established a deputation for worship and public instruction corresponding to the education department at Berlin. They represented the state authority in the super-

vision of the schools in the provinces. In 1810 three scientific deputations, one at Berlin, one at Königsberg, and one at Breslau, were established to examine teachers for secondary schools and to advise the Government on important matters relating thereto. At present Prussia is divided into fourteen provinces and each province is divided into departments, of which there are thirty-six in all. There is a provincial school board in each of the chief towns of each of the provinces and a governmental district board in each of the departments. The provincial school board has for its president the president of the province, and there are three or four other members, one of whom is the director of the district which happens to have its center at the provincial capital, one generally a Catholic, one a Protestant, and one is always a man practically conversant with school matters. The district board has, in the provincial capitals, the same director and president as the provincial board, and in the other departments its president is the president of the department and the remainder of the board is on the same principles as the provincial board. For the gymnasiums, progymnasiums, and real schools of the first rank the state authority is the provincial school board; for real schools of the second rank, higher burgher schools, and the primary schools of all kinds, the Government district board. Both boards maintain close relation with the minister of education at Berlin and report to him frequently. The scientific deputations are now replaced by seven examination commissioners, having their seats at the seven university towns of Prussia—Berlin, Königsberg, Breslau, Halle, Münster, Bonn, and Greifswald. Each director in these deputations must report to the minister every year.

The local administration of the higher schools has always been greatly varied according as they were Crown patronage schools, private patronage, or mixed patronage schools. The Crown patronage schools are immediately under the provincial board. In most towns the local authority for schools of municipal patronage is the town magistracy, assisted by a city school councillor.

General features.—The schools we are to deal with are of the class called by the French secondary, by the Germans higher, and sometimes called intermediate or middle schools. They fill by far the largest place in the German educational system. They are planned to take the boy at the beginning of his tenth year and keep him nine years, and to turn him out at 19 or 20 fit, or “ripe,” to use the German term, for university studies. He therefore spends not more than three years in the common schools or in preparatory classes before entering the higher school course, and as a rule not more than three years in his university studies, against nine years spent in the higher schools. These schools are entirely distinct from the *Volksschule*, or common schools. The latter are intended for the masses, and have a course of eight years’ duration; every German child must attend these schools,

beginning with the completion of his sixth year and continuing until his fourteenth year, unless he attends preparatory classes of high schools. This common-school education is compulsory; attendance at the higher schools is not compulsory. In another paragraph the advantages attained by attending these schools will be somewhat fully explained. None of the Prussian higher schools are free schools. Higher schools are either under the patronage of the crown, of municipalities, of private individuals, or mixed patronage, but those for boys only are all in every sense public schools. They are under the immediate supervision of the education department; through some of its officials they follow the *Lehrplan* or programme of studies prescribed by the Government; and they qualify their pupils to pass the Government examinations. Private higher schools are few in number, and are for girls only, except in their lower grades. Such as are found conform to the programmes of the public schools, and are taken advantage of by parents who do not wish to send their boys at an early age to a public school that is often overcrowded. The object is to fit the boy to pass at a later period into an advanced class in some one of the public schools.

The schools are of three general types, corresponding in a general way to the classical, the Latin-scientific, and scientific courses in American preparatory schools and colleges. The work, as will be seen by consulting the programmes of these schools, given elsewhere in this chapter, is much more advanced than that of American preparatory schools, and falls not far behind the standard of, say, the junior year in American colleges. The gymnasiums and progymnasiums are the classical schools; the real gymnasiums, the Latin-scientific schools; the real schools and higher burgher schools are the scientific schools; whereas we find in America these three courses running side by side in the same school; in Germany that is never the case. Precisely the arrangement found in American schools is one of the things most desired by many of the school reformers in Germany. We will take up each of these different types somewhat in detail.

The gymnasium.—The name gymnasium came into use as early as the sixteenth century. The ministerial decree of the 12th of November, 1812, ordered that all learned school institutions, such as lyceums, pedagogiums, collegiums, Latin schools, etc., should bear the name gymnasium. A gymnasium is and has long been a classical school. It has properly six classes, counted upward from the sixth, the lowest, and called *sexta*, *quinta*, *quarta*, *tertia*, *secunda*, and *prima*. *Sexta* and *quinta* constitute the lower division, *quarta* and *tertia* the middle division, and *secunda* and *prima* the higher division. In the three lower classes the course is one year; in the three upper it is two years, making the entire course nine years. There are two terms, or semesters, and generally two corresponding sections in each class, one section comprising the scholars who enter at Easter and the other those who enter at Michaelmas. The *Klassen-System*, or class system, which

keeps the pupil in the same class for all his work, has come to prevail generally. The programme and detailed courses of study that follow will give teachers a clear idea of the work of the school, and further description is unnecessary. The progymnasium is simply a gymnasium which lacks the upper classes—that is, the two years of prima.

Programme of the Gray Cloister Gymnasium, Berlin, for the year 1890-91.

Subjects.	Number of hours weekly.									
	Upper I.	Lower I.	Upper II.	Lower II.	Upper III.	Lower III.	IV.	V.	VI.	Total.
Religion	2	2	2	2	2	2	2	2	3	19
German	3	3	2	2	2	2	2	2	3	21
Latin	8	8	8	8	9	9	9	9	9	77
Greek	6	6	7	7	7	7				40
French	2	2	2	2	2	2	5	4		21
Hebrew	2	2	2							6
English	2		2							4
Italian		2	2							4
History and geography	3	3	3	3	3	3	4	3	3	28
Mathematics	4	4	4	4	3	3	4	4	4	34
Physics and natural science	2	2	2	2	2	2	2	2	2	18
Gymnastics	2	2	2	2	2	2	2	2	2	18
Drawing							2	2	2	6
Singing							3	3	3	9
Writing								2	2	4

The actual number of hours of instruction given in the school was much greater than is indicated above, for all the classes up to upper secunda were divided into an Easter and Michaelmas section. In the upper classes there were eight hours of singing, in mixed classes, and four hours of elective drawing were likewise offered to the upper classes.

COURSES OF STUDY IN THE GRAY CLOISTER GYMNASIUM, BERLIN, FOR THE YEAR 1890-91.¹

UPPER PRIMA.

Religion.—Evangelical: The chief features of Christian belief and morals, in connection with the reading of the Gospel of John in the original, and the *Confessio Augustiniana*, 2 hours. Catholic: Doctrine of redemption and completion. History of the Church from Gregory VII to Boniface VIII, 2 hours.

German.—Literary history: summer, Luther, Hans Sachs, Klopstock; winter, Lessing. Elements of philosophy: summer, psychology; winter, logic. Extempore lectures in connection with the reading and essays, 3 hours. Themes for the essays: 1. (a) The similarities in Sophocles' *Oedipus Rex* and in Schiller's *Bride of Messina*. (b) How did the flower of Middle High German poetry manifest itself in the thirteenth century? 2. (a) *Suum cuique*, a good motto for a prince. (b) The parable of Nathan the Wise. 3. (a) Development of the fundamental thoughts in Schiller's four ballads: *The Ring of Polycrates*, *Walk to the Forge*, *Surety*, and *the Battle with the Dragons*. (b) Kreon in *Antigone*, his right and his wrong. 4. For what benefits does Horace implore Apollo in Ode 1, 31: *Frui paratis*, etc.? 5. What is the importance of Frederick the Great in German national literature? Analysis of

¹References to special text-books are omitted.

Klopstock's ode, *The Lake of Zurich*. 6. (a) The saying of Frederick the Great: "It is necessary that I live, but quite as much so that I be active." (b) Why has Minna von Barnhelm been called a Prussian piece? 7. (a) *Sustine et abstine*. (b) *Wen Gott lieb hat, den züchtigt er* (whom God loveth he chasteneth). 8. On what does Lessing base his saying: "If the artists of the Laocoön group followed Virgil, I can give an account of all their variations"?

Latin.—Cicero, *Tusculanæ disputationes*, I-II, Third Philippic, Oration against C. Verres; Tacitus, *Annals*, I-II; Horace, Books II and III, and various satires and epistles. Extemporizations, exercises, and essays. 8 hours.

Themes for the Latin essays: 1. Epicuri de amicitia sententia quæ fuerit et quo modo a Cicerone refellatur. 2. *Ilias* "stultorum regum et populorum continet æstus" (Hor., *epist.* I, 2). 3. Quo modo Cæsar Helvetios devicerit. 4. Enarratur Horatii epistola libri primi prima (essay for graduation). 5. Cleopatrarum amorem Antonio exitio fuisse. (secundum fabulam Shakespeareianam). 6. De Germanis in Galliam invadentibus quæ C. Cæsar memoriæ prodiderit. 7. Quo modo C. Verres Siciliam provinciam a piratis defenderit.

Greek.—Demosthenes, *Philippics*; Plato, *Euthyphron*; Sophocles, *Œdipus Rex* and *Antigone*; Homer, *Iliad*, VII-XVIII. Grammatical exercises and reviews. 6 hours.

French.—Mirabeau, speeches; Guizot, *Histoire de la civilisation en Europe*. Fixing of grammatical knowledge by exercises and extemporizations. 2 hours.

Hebrew (elective).—Grammar and syntax. Reading selections from Genesis, Samuel, Kings, and the Psalms. 2 hours.

English.—Grammar; reading Dickens' Sketches. 2 hours.

Italian.—Syntax and review. Extemporizations and exercises in speaking. Reading Goldoni's *La Scorzese*, *L'albergo della posta*; Manzoni's *I promessi sposi*. 2 hours.

History and geography.—German history from the French Revolution to the constitution of the new German Empire. 3 hours.

Mathematics.—Written and oral review of previous work. 4 hours.

Physics.—Optics and astronomy. 2 hours.

LOWER PRIMA.

Religion.—Evangelical: General view of the development of the Christian church; reading the most important of the Pauline epistles in a selection of extracts from the original text; 2 hours. Catholic: Same as Upper Prima.

German.—Literary history: summer, Luther to Lessing; winter, Lessing. Reading: summer, Hans Sachs and Luther; winter, Lessing's *Laocoön*. For private reading, Lessing's principal dramas and the Hamburg Dramaturgy. Compositions and public speaking. 3 hours.

Themes for the essays: 1. (a) Eumæus, the excellent swineherd. 2. What principles did Luther follow in translating the Bible? 3. Lessing's university life (according to the letters to his mother of January 20, 1749). 4. Does the expression of physical pain in the features of *Laocoön* correspond to nature, and how may certain deviations be justified? etc.

Latin.—Cicero, *Tusculanæ disputationes*, I-II, Third Philippic, v in C. Verrem; Tacitus, *Annales* I-II; Horatius, *Carmina* I, II, and various satires and epistles; extemporizations, compositions and exercises. 8 hours.

Greek, Hebrew, English, Italian, same as Upper Prima.

French.—Molière, *Les précieuses ridicules*; poems; Voltaire, *Siècle de Louis XIV*.

History and geography.—German history from the Crusades to the French Revolution; history of Brandenburg. 3 hours.

Mathematics.—Stereometry. Combinations, probabilities, continued fractions, indeterminate equations. 4 hours.

Physics.—Statics and mechanics of fixed bodies, galvanism. 2 hours.

UPPER SECUNDA.

Religion.—Evangelical: Biblical knowledge of the New Testament, in connection with the reading of the Gospel of Matthew and more important divisions of the history of the Apostles and of the Epistle to the Romans in the original text; 2 hours. Catholic: Combined with Prima.

German.—Introduction to the history of the German language. Reading, Gudrun and Walter von der Vogelweide. 2 hours.

Latin.—Livy, III-IV; Cicero, Pro Milone; Sallust, Jugurtha; Virgil, Æneid, VII, VIII, XII. Extemporizations, etc. 8 hours.

Greek.—Homer, Odyssey, XVII-XXIV; Plato, Criton; Xenophon, Hellenics, III; Lysias, Eratosthenes. Modes, indirect discourse, infinitive, participle; general view of the use of negations; oral and written exercises. 7 hours.

French.—Feuillet, Le village; Banville, Gringoire; fables of La Fontaine; Duruy, history of France from 1559 to 1598. Review of syntax. 2 hours.

Hebrew.—Alphabet and sounds, regular verbs, verbal suffixes, conjugation of guttural and semivocal verbs, etc. 2 hours.

English.—Grammar and reading. 2 hours.

Italian.—Grammar; reading Silvio Pellico, Le mie prigioni. 2 hours.

History and geography.—Conclusion of Roman history to the downfall of the Western Empire, and history of the Middle Ages to the Crusades. Review of Grecian and Roman history and the geography of Europe. 3 hours.

Mathematics.—Theory of equations; series, percentage; trigonometry. 4 hours.

Physics.—Heat, mechanics, acoustics. 2 hours.

LOWER SECUNDA.

Religion.—Evangelical: Bible knowledge of the Old Testament, in connection with the reading of selections from the historical, poetical, and prophetic books of the Old Testament; repetition of the catechism and of the church songs learned. 2 hours. Catholic: Combined with Prima.

German.—General view of the chief divisions of German poetry. Reading, Hermann und Dorothea, Götz von Berlichingen, Jungfrau von Orleans, Maria Stuart. Essays. 2 hours.

Latin.—Repetition and completion of the uses of moods and tenses, oral translations, extemporizations, and exercises. Reading, Livy, XXIII, XXIV; Cicero, Pro Archia, Pro Ligario, Divinatio in Q. Cæcilius; Virgil, Æneid, I, II. 8 hours.

Greek.—Chief rules of the syntax of nouns; concerning the agreement of subject and predicate; the use of articles and pronouns; essentials concerning cases and prepositions; the use of moods and tenses; introduction into the forms of the epic dialect. Reading: Xenophon, Anabasis, V-VII; Homer, Odyssey, III-VI. Oral and written exercises. 7 hours.

French.—The subjunctive, infinitive, participle, gerundive; rules of verbs and pronouns. Reading: Verne, Le tour du monde en 80 jours. 2 hours.

History and geography.—Grecian history; Roman history to 133 B. C.; ancient geography. 3 hours.

Mathematics.—Proportions in rectangular figures and the circle. Rectification and quadrature of the circle. Theory of powers and logarithms. Equations of more than one unknown quantity, and difficult equations of one unknown quantity. 4 hours.

Physics.—The simplest theories of chemistry. Magnetism and frictional electricity. 2 hours.

UPPER TERTIA.

Religion.—Evangelical: History of the Apostles according to Luke, and reading of the Epistle to the Galatians. General view of the history of the Christian Church. The third, fourth, and fifth principal sections of the Lutheran catechism explained.

Biblical proverbs, church songs. 2 hours. Catholic: Salvation, redemption, completion; the New Testament to the Ascension of Christ. 2 hours.

German.—Foundations of prosody and meter. Exercises and declamations. Selections from Schiller and Uhland. 2 hours.

Latin.—Grammar, moods and tenses. Written and oral exercises in translating from German into Latin. Reading: Cicero, *De imperio Cn. Pompeii*, *Pro rege Deiotaro*; Cæsar, *Bellum civile*, III; Ovid, selections from Books VIII-XV. 9 hours.

Greek.—Review and completion of forms; irregular comparison; numerals; verbs in μ and irregular verbs; syntax. Reading from reading book and *Anabasis*. Exercises and extemporizations. 7 hours.

French.—Use of tenses, position of words and the article. Reading: Michaud, *Histoire de la première croisade*, VI-VIII. 2 hours.

History and geography.—Recent German history to 1871. Review of geography. 3 hours.

Mathematics.—Comparisons, transformation and calculation of the surface contents of plane figures. Chords and tangents to the circle. Regular inscribed and circumscribed polygons. Fractions. Square and cube root. Easy equations of one unknown quantity. 3 hours.

Natural science.—Summer, human anatomy; winter, mineralogy. 2 hours.

LOWER TERTIA.

Religion.—Evangelical: The history of Jesus according to the Gospel of Luke, with especial attention to the Passion; general view of the ecclesiastical year; explanation of the second chief division of the Lutheran catechism; biblical proverbs, church songs. 2 hours. Catholic: Combined with Upper Tertia.

German.—Compositions, which are critically considered according to contents and form. Exercises in declamation. Reading ballads from Schiller and Uhland. 2 hours.

Latin.—Forms and cases. Cæsar, *Bellum Gallicum*, I-IV. Weekly extemporizations or exercises. 9 hours.

Greek.—Declinations, regular comparisons, pronouns, conjugation of verbs in ω . Reading from reader. Written house and class exercises. 7 hours.

French.—Grammar. Reading: Michaud, *Histoire de la première croisade*, II. 2 hours.

History and geography.—German history in the Middle Ages, 2 hours. Geography, 1 hour.

Mathematics.—Summer, the triangle and parallelogram, introduction to the circle. Winter, the first four rules in algebra. 3 hours.

Natural science.—Summer, botany: some especially difficult phanerogams; easier cryptogams; Linnæus's system; consideration of a number of foreign plants. Winter, zoölogy: lower animals, mollusks, etc. 2 hours.

QUARTA.

Religion.—Evangelical: Connected biblical history of the Old Testament; geography of Palestine; explanation of the first chief division of the Lutheran catechism; learning of the fourth and fifth divisions; biblical proverbs; church songs. 2 hours. Catholic: Combined with Tertia.

German.—Study of the sentence. Written paraphrases of short stories. Reader. 2 hours.

Latin.—Verbs with different perfects and supines; rules for the accusative with infinitive, ut, ne, quo, quominus, quin, the gerund, participles, indirect question, and rules for case. Reader, oral translation from German into Latin. 9 hours.

French.—Grammar, irregular verbs. Reader. 5 hours.

History and geography.—Grecian history, including the Sagas of the Heroes, and Roman history; 2 hours. Geography of Europe outside of Germany; 2 hours.

Mathematics.—Changing common fractions to decimal fractions, and the reverse. Decimals, business calculations. Geometry, preliminary propositions to the triangle. 4 hours.

Natural science.—In summer, botany; winter, zoölogy. 2 hours.

QUINTA.

Religion.—Evangelical: Biblical history of the Old Testament; learning the third division of the Lutheran catechism; biblical proverbs; church songs. 2 hours. Catholic: The last six articles of faith; the public life of Jesus from the second Easter to the Ascension; biblical history; Roman Catholic catechism for the diocese of Breslau. 2 hours.

German.—Punctuation, dictation, and written reproduction of short stories. Exercises in reading and declamation. 2 hours.

Latin.—Forms and reading book. Half of the verbs with different perfects and supines; construction of the accusative with the infinitive, and participles. Fables. Extemporizations and exercises. 9 hours.

French.—Grammar. 4 hours.

History and geography.—Biographies from Roman history and tales from the German sagas, 1 hour. The earth outside of Europe, 2 hours.

Reckoning.—Common and decimal fractions; geometrical drawing. 4 hours.

Natural science.—Botany and zoölogy. 2 hours.

SEXTA.

Religion.—Evangelical: Biblical history of the Old Testament; explaining the first and second chief divisions of the Lutheran catechism; biblical proverbs; church songs. 3 hours. Catholic: Combined with Quinta.

German.—Orthography; exercises in reading and declamation; dictation. 3 hours.

Latin.—Forms and reading exercises; easy composition. 9 hours.

History and geography.—Tales from Grecian mythology and history, 1 hour. General geography, 2 hours.

Reckoning.—The four fundamental rules, factoring, proportion, weights and measures. 4 hours.

Natural science.—Botany; zoölogy. 2 hours.

NOTES.—No scholar is excused from religious instruction. Instruction was also imparted in the Hebrew religion. There were gymnastic exercises 2 hours per week for all classes, and voluntary exercises every Saturday afternoon on the large playground in Friedrichshain. The instruction in singing was as follows:

(1) *Lower sexta*.—Beginning of harmony and rhythm; learning notes; practice of choral melodies and easy one-voice songs. 3 hours.

(2) *Upper sexta*.—Choral melodies and one-voice motettes and songs. 3 hours.

(3 and 4) *Lower quinta*.—This class was divided in two sections, according to the voices of the scholars (soprano or alto). Each section sang somewhat difficult one-voice songs, motettes, etc. 3 hours. With promotion to upper quinta the scholars who have taste and ability for music go at once into the first singing class.

(5) The second singing class for sopranos and altos, which includes scholars from upper quinta, lower quinta, and upper quarta. In this are practiced easy hymns, songs, and sacred selections for two voices. 2 hours.

(6) The second singing class for tenors and basses. This includes the scholars in the upper classes whose voices have changed. They practice the same class of music as 5, and both prepare for choir singing.

(7) The first singing class for the complete chorus. Practice of four (and more) voice sacred selections, with an orchestra, singing pieces like Handel's Oratorios. The chorus sings regularly twice a week one hour. There are two more hours appointed in which the sopranos and altos have special preparation for their parts.

Drawing is obligatory in the lower classes, sexta, quinta, and quarta, and elective in the upper classes. The instruction was as follows:

Sexta.—Straight lines in different positions. Angles and their division, squares and their combinations. Representation of different shaped bodies with flat surfaces in various groupings; Circles, rosettes, ellipses. Application of the different curves in ornamental forms. 2 hours.

Quinta.—Free-hand drawing of symmetrically arranged figures according to wall charts. Application of the square, rhomb, and parallelogram. 2 hours.

Quarta.—Continuation of free-hand drawing after charts; elective instruction in drawing; artistic free-hand drawing after models and plaster casts (heads and parts of heads, ornaments, flowers, landscapes, animals) to antique heads from plaster, with light and shade according to different methods of technical treatment; descriptive geometry; aquarelles. 2 hours.

Real-schools.—The name *Realschule* or Real-school was first used at Halle. Christoph Semler, in 1738, established there a school with this title. Isolated schools of this type were found in various parts of the country, but they were not successful until about 1822. In 1832 the government began to occupy itself somewhat with them, and in 1859 a definite plan and course was framed for them, as had previously been done for the gymnasium. Three kinds of real-schools were distinguished in this government order of 1859—real-schools of the first rank, real-schools of the second rank, and higher burgher schools. In the words of the decree, all these three classes “have the common purpose of affording a general scientific preparation for those callings for which university studies are not required.” Real-schools of the first and second order had, like the gymnasiums, a nine years’ course; the higher burgher schools a six years’ course. In real-schools of the first order Latin was a required study; real-schools of the second order did not have Latin in their course and could adapt themselves more to the local needs. The programmes of each of these schools given below will clearly indicate the differences existing between them. As the terms are at present used, all schools except gymnasiums are included under the general name of “real institutions,” and give a “realistic” or “scientific and practical” training. Higher real-schools are schools without Latin, having a full nine-years’ course. *Real-schools* simply lack the two upper classes of *higher real-schools*. They are 7-class institutions.

The real gymnasium.—By a government order of the 31st of March, 1882, the study plan of the real-schools of the first order was materially modified and the name real-gymnasium was applied to them. This class of schools are therefore now called in Prussia real-gymnasiums, and in the other German states real-schools of the first order. The change made consisted briefly in increasing the amount of Latin by about 25 per cent. The privilege which had been earnestly sought by friends of the real-gymnasium, of allowing its graduates to enter upon the study of medicine, was not, however, granted. It is about the real-gymnasiums that the reform battle, so far as it refers to external school relations, has chiefly raged, and the programme given below will there-

fore be of special interest. The changes made when the course was reorganized and the name real-gymnasium was introduced may be seen by referring to the programmes given in the appendix.

Programme of the higher real-school, Luisenstadt, Berlin, for the year 1890-91.

Subjects.	Number of hours weekly.									
	Upper I. ^a	Lower I.	Upper II.	Lower II.	Upper III.	Lower III.	IV.	V.	VI.	Total.
Religion	2	2	2	2	2	2	2	2	3	19
German	3	3	3	3	3	3	4	5	5	32
French	5	5	5	5	6	6	8	8	8	56
English	4	4	4	4	5	5	5	5	5	26
History and geography	3	3	3	3	4	4	4	2	2	28
Mathematics	5	5	5	5	6	6	6	6	5	49
Physics	3	3	4	4	4	4	4	4	4	14
Chemistry	3	3	3	3	3	3	3	3	3	9
Natural sciences	3	3	3	3	2	2	2	2	2	13
Drawing	4	4	3	3	2	2	2	2	2	24
Writing	2	2	2	2	2	2	2	2	2	6
Gymnastics	3	3	3	3	3	3	3	2	2	2
Singing	3	2	3	2	3	2	3	2	2	2
Total	32	32	32	32	30	30	30	29	29	.....

^a As a matter of fact, in this particular school prima is not divided into an upper and lower section; so in reality there were but eight classes. As a rule there are nine. For the normal plan, see appendix.

Programme of the real-school in Potsdam for the year 1890-91.

Subjects.	Number of hours weekly.							
	Upper II.	Lower II.	Upper III.	Lower III.	IV.	V.	VI.	Total.
Religion	2	2	2	2	2	2	3	13
German	3	3	3	3	4	4	4	21
French	5	5	6	6	8	8	8	41
English	4	4	5	5	5	5	5	14
History	2	2	2	2	2	1	1	10
Geography	1	1	2	2	2	2	2	12
Mathematics	5	5	6	6	6	6	5	39
Mechanics	1	1	1	1	1	1	1	1
Physics	3	4	4	4	4	4	4	7
Chemistry	3	3	3	3	3	3	3	3
Natural history	3	3	2	2	2	2	2	13
Drawing	3	3	2	2	2	2	2	13
Writing	2	2	2	2	2	2	2	6
Singing	2	2	2	2	2	2	2	6
Gymnastics	2	2	2	2	2	2	2	10
Total	36	26	34	34	34	33	33	.....

This school has also a preparatory school with a three years' course.

Programme of the Sophia Real-gymnasium, Berlin, for the year 1890-91.

Subject.	Number of hours weekly.															Total.
	I.	Upper II.	Lower II E.*	Lower II M.	Upper III E.	Upper III M.	Lower III E.	Lower III M.	IV E.	IV M.	V E.	V M.	VI E.	VI M.		
Religion	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30	
German	3	3	3	3	3	3	3	3	3	3	3	3	3	3	42	
Latin	5	5	5	5	6	6	6	6	7	7	7	7	8	8	88	
French	4	4	4	4	4	4	4	4	5	5	5	5	6	6	52	
English	3	3	3	3	4	4	4	4	4	4	4	4	4	4	28	
History	3	2	2	2	2	2	2	2	2	2	1	1	1	1	25	
Geography	5	1	1	1	5	5	5	5	5	5	2	2	2	2	23	
Mathematics	5	5	5	5	5	5	5	5	5	5	4	4	4	4	63	
Natural history	3	3	2	2	2	2	2	2	2	2	2	2	2	2	24	
Physics	3	3	3	3											12	
Chemistry	4	2													8	
Writing	2	2	2	2	2	2	2	2	2	2	2	2	2	2	23	
Drawing	2	2	2	2	2	2	2	2	2	2	2	2	2	2	23	
Total	34	32	32	32	32	32	32	32	30	30	30	30	28	28	460	
Singing	Each 2 (1st section 4)				2 (2d sections)				2		2	2	2	2	28	
Gymnastics	2+1				2		2	2	2	2	2	2	2	2	21	
Jewish religion	2				2				2		2				6	
Total number of hours of instruction given per week.....															515	

* E after the number of a class denotes the Easter section, M the Michaelmas section.

Programme of the First City Higher Burgher School, Berlin, for the year 1890-91.

Subjects.	I.	II.	III.	IV.	V.	VI.	Total.
Religion	2	2	2	2	2	3	13
German	3	3	4	5	7	7	29
French	6	6	8	8			28
English	6	5					11
History and geography	3	4	4	4	4	4	23
Mathematics	5	5	6	6	6	5	33
Natural history		2	2	2	3	2	11
Physics	2	3	2				7
Chemistry and mineralogy	3						3
Writing			2	2	2	3	9
Drawing	2	2	2	2	2	2	12
Singing	2	2	2	2	2	2	12
Gymnastics	2	2	2	2	2	2	12
Total	36	36	36	35	30	30	201

Vacations.—The vacation regulations for the higher schools of Berlin and its suburbs for 1891 were as follows:

(1) Easter vacation: Close of the school year, Tuesday, March 24; beginning of the new school year, Wednesday, April 8.

(2) Whitsuntide vacation: Close of instruction, Friday, May 15; beginning of instruction, Thursday, May 21.

(3) Summer vacation: Close of instruction, Friday, July 3; beginning of instruction, Monday, August 10.

(4) Autumn vacation: Close of the summer half-year, Saturday, October 3; beginning of the winter half-year, Monday, October 12.

(5) Christmas vacation: Close of instruction, Saturday, December 16; beginning of instruction, Monday, January 4.

The vacations correspond in general to the above scheme.

Privileges.—Aside from the importance which the higher schools would naturally assume in so intellectual and enlightened a nation as Prussia, there are certain valuable premiums set upon attendance upon the same by the Prussian Government that make them a tremendous factor in the social and industrial as well as intellectual life of the nation. These are the *Berechtigungen* or privileges; and the position of the higher schools, in the popular estimation, can only be understood by carefully considering these privileges.

The common schools, attendance on which is compulsory, give no privileges or rights. No public or professional career is open to a boy who has completed his common-school course. The right to one year volunteer military service is the one which is common to all the higher schools, and, therefore, we speak of it here first. As a rule, every German youth must serve three years in the army; if, however, he has completed six years of the course in the higher schools, that is to say, if as has completed the entire course of a higher burgher school, or the course as far as upper secunda of a gymnasium, real-gymnasium, or real-school, he may volunteer, as it is called, for one year to serve at his own expense. As all in the volunteer service are, to a certain extent, educated, and, since they pay their own expenses, presumably wealthy, this service is much higher than the ordinary service. It is, therefore, a decided distinction to belong to it, and families of limited resources often make great sacrifices to enable their sons to volunteer.

Graduates of gymnasiums have open to them nearly all the avenues to posts of honor and profit. They are admitted to the universities and to the study of any of the learned professions, as well as to teaching in all its branches. Graduates of the real-gymnasiums are excluded from the learned professions, and may study only with the philosophical faculty of a university, and may become teachers only in mathematics and modern languages, and are then eligible for positions only in real-schools. The real-schools qualify for admission to the technical high schools. For the privileges of the various classes of schools, as recommended by the conference, the reader is referred to Conclusions of the Conference (p. 393), under question 13.

It will be readily seen that the way to any high position, in the army, in the Government service, in all the professions, lies, in Prussia, through some one of the higher schools. The right of one-year military service is the one most generally coveted and striven for. But the other privileges interest a vast number. The choice of an occupation and settlement therein is much more difficult in Germany than here; change from an occupation once chosen is likewise more difficult; so difficult that it seldom takes place, and changes of importance can only be made by the central government. Moreover, it must be borne in

mind that these different classes of high schools do not exist side by side; but that one place will have only a gymnasium, another only a real-school, another only a higher burgher school. The case of poor parents with a bright son, whom they wish to educate to the profession of medicine, situated in a town where there is a real-gymnasium only, will help us to appreciate the importance the school question has assumed to the common people. These parents might send their son through the complete course in the real-gymnasium, and yet he could not be admitted to study medicine. It was for such cases as this that the union school was recommended as a common preparatory school with a six years' course. Parents in humble circumstances might be able to send their sons the last three years to the necessary finishing school, if it was arranged so that the first six years of the course might be taken at home. But this arrangement did not find favor with the conference.

Final examinations.—The final examination in the higher schools, variously called graduating examination, examination for maturity, examination for ripeness, examination for dismissal, etc. (Abiturienten-examen, Reifeprüfung, Maturitätsprüfung, Entlassungsprüfung, Abgangsprüfung), is the focus of the school system. On it depend all the privileges that graduation from any of the higher schools confers. The scholar who presents himself for this examination receives a certificate of ripeness or of unripeness. He may go to the university with his certificate of unripeness, but the conditions are then unfavorable and unpleasant. This examination has existed since 1787. Humboldt reformed it with the object of diminishing the throng of ill-prepared candidates who presented themselves at the universities. For, inasmuch as, to quote the words of Dr. Hartwig in his address before the conference, "a certificate of incapacity could not be refused to the most incapable, people paraded themselves as academic citizens who had not the least presentiment of Greek, knew quite as little of history and mathematics, and of Latin often not more than the alphabet." The introduction of examinations for admission held by the universities themselves only made matters worse, for the university faculties proved themselves very reluctant to turn candidates away. Between the high standard of the Government and the low standard of the universities it came about that there was really no standard at all. Humboldt originated a general regulation for examination, obligatory in all cases. According to this there were three grades of certificates, the first declaring its possessor thoroughly qualified for university studies; the second declaring him to be partially qualified, and the third declaring him to be wholly unqualified. The way in which the universities coöperated in Humboldt's ideas may be illustrated by the fact that at Bonn, in the year 1822, out of 139 certificates for that year 122 were of the third class, declaring the holders unqualified for the university, 16 were of the second class, declaring him partially qualified, and only

I was of the first class, declaring him thoroughly qualified. The regulation of the 12th of June, 1834, greatly increased the severity of the examination, and in 1856 it was again somewhat diminished. In 1882, an additional regulation was issued which added questions in geography to the oral examination, also oral translation from French and written translation from Greek. The written translation into Greek and into French was relegated to an earlier time. As it exists to-day the examination is both oral and written. The paper work lasts a week. The oral examination is open to the public. The teachers attend in full dress. Each class is examined by its instructor, and the president of the examining commission may choose any passage for translation and put any question he thinks proper.

Specimens of the topics set for the written examination may be seen in the courses of study of the various schools given above. If the commission are not unanimous about passing the candidate, they vote. The president may, however, refuse to pass the candidate, though the majority have voted for him. In such a case the papers must go to the highest authority for their decision. The certificates are given out to the successful candidates at the solemnity or solemn dismissal which takes place in the Aula of the school at the end of each semester. The usual order of exercise in a gymnasium consists of music, Latin, Greek, French, and German addresses, each by a member of the graduating class; a farewell address from one of the remaining students to those departing; and an address by the rector followed by distribution of diplomas. The general plan is about the same in all the other schools.

Every effort is made to avoid cramming and special preparation, and to make the examinations such as "a scholar of fair ability and proper diligence, may at the end of his school course come to with a quiet mind, and without a painful preparatory effort, tending to relaxation and torpor as soon as the examination is over." Since 1834 there has been a good deal of general public feeling in favor of lightening the severity of these leaving examinations. The school conference, as will be seen further on, changed it somewhat in the way of simplification, but there was very strong opposition among the members to lightening it or making it easier. Dr. Jäger in his address before the conference gave expression to these views when he said, "If I am in favor of the simplification I am on the contrary not in favor of an alleviation; I expressly guard against that. The difficulty of this examination remains as before, for, and I will say that also, we ought not to go too far in unburdening the youth. We must remember that the youth whom our gymnasiums educate, in the future will come into the most responsible positions; into positions where their capacity for work may have very unusual claims made upon it. Therefore the youth must learn already in the gymnasiums to work more intensely than other youths; and, therefore, it is right and just that at the end of this nine years' course the examination must be approached. If you lighten it

too much then you create an intellectual proletariat. In that case all would pass the examination as you fasten the ribbon of the legion of honor in your buttonhole. That I should like to avoid. I am therefore for preserving and indeed for simplifying but not for easing the examination."

Gymnastics.—The ninth question submitted by the minister of education to the conference concerned itself with the instruction in gymnastics, and the positive and energetic utterances of the Emperor on this subject gave it a prominent place in the deliberations. Gymnastics, or "Turnen," as the Germans speak of it, early found place in the school programmes of Prussia, but for various reasons ceased to be obligatory upon the pupils. A government order in 1842, however, declared that gymnastic exercises should henceforth be obligatory in all the schools of the kingdom. As a rule they have occurred two hours weekly, and the schools have been divided for this purpose into rather large sections. Notwithstanding the severe strictures made by the Germans themselves, an American visitor can hardly fail to be impressed with the excellence of the provisions for this training. Even the common schools are provided almost universally with excellent halls, very frequently in a separate building, most admirably equipped for such kinds of class work as can be carried on in the school. The work consists of exercises with dumb-bells, wands, rings, on the ladder, on the parallel and horizontal bars, jumping, running, playing hand ball, and various marching exercises, often carried on to the accompaniment of music. There is also, as a rule, either immediately connected with the school building or in some other part of the city, not infrequently in the park, a play ground also equipped with parallel and horizontal bars and other apparatus for such exercises as may be advantageously carried on in the open air. So far as possible the exercises are conducted on the play ground in pleasant weather. The school is often taken to the play ground for the afternoon hours, when regular class work is not carried on, but the children exercise as they please for the most part, always accompanied by at least one and generally several teachers.

The instruction in gymnastics can be imparted only by teachers who have qualified themselves especially for this work and have passed a special examination in it. They must, in addition, be regular teachers in the school and must therefore have passed the teachers' examination and attained at least a third-grade standing. This at once excludes men who are simply athletes but lacking in the moral and intellectual faculties which should qualify them for helpful contact with the young. Usually they give instruction in some other branches and the instruction in gymnastics is not as a rule intrusted to a single teacher, but is divided among two or more. That teachers may qualify themselves for this particular work a special course, beginning the 1st of October and running through six months, is given in the Royal Institution for Gymnastic Training in Berlin. It can not fail to strike any observer

that the class exercises in gymnastics in the German schools are usually prepared with an accuracy and finish that are often truly remarkable. The sense for discipline which is so strong in the German nature here shows itself. On festival and holiday occasions gymnastic exhibitions by pupils of the different schools often form a part of the day's programme, and by no means the least interesting part.

Where, then, are the weak points in the system?

(1) The amount of gymnastic exercise provided for by the schools may be sufficient for perfecting the pupils in certain school exercises, but it is wholly and absolutely inadequate from the point of view of physical development. No one will for a moment maintain, even in Germany, that two hours a week is exercise enough to keep the growing child in good health and further the development of its physical organization.

(2) But it may be asked whether any other country is any better off in this respect; whether it is possible to provide in a school for the necessary amount of exercise; whether this must not be left to the natural exuberance of the children, who will find their own exercise outside of school hours and free from school regulations? We must remember that the German boy has practically no games; that is his one great misfortune; baseball, football, cricket, and tennis, are practically unknown in Germany. The exuberance of our American schoolboy which finds vent in an eager interest and participation in all the games of his school; school ball teams, athletic contests between rival schools; interacademic athletic associations, these find no place, they have no equivalent, in the life of the German schoolboy. His amusements are as a rule of a quieter order. He is not accustomed to act spontaneously and freely as is the American boy, and moreover after he has once entered upon the course of the gymnasium, or real school either, he is much more heavily burdened with school duties than our average American boy. By referring to the programmes of these schools given above and in the appendix, it will be seen that the number of hours per week is seldom less than thirty. To this is to be added as a rule the instruction in singing and gymnastics, and the home study, which may be reckoned at not less than from two or three hours per day. The figures in the Emperor's speech show plainly what the state of affairs was when he was a student at the Gymnasium at Cassel. The result of all this is that the German boy differs as widely as possible from the American and English schoolboy. He is quieter, more self-contained, lacking the wildness and exuberance, lacking also in the tremendous vigor which characterizes the youth of these two progressive nations. At eighteen he knows a great deal more Latin and Greek, he can go through methodical exercises with his class on the bars or with dumb-bells probably a great deal better than his Anglo-Saxon brother, but he will throw a baseball as awkwardly as a girl, and he would be homeless on the football field. A cricket

ball he would mistake for a cannon ball, and consider it quite as deadly. Tennis he would probably look down upon with some disdain as a game fit only for loungers and idlers. The inevitable result of such a condition of things is that the young men or rather boys spend much time in quieter amusements, such as card-playing and billiards, and very often drink much beer as a preparation for their university course. It is a healthful sign that the Germans themselves are becoming fully aware of the fact that this is not the best physical preparation for life. There can be no possible question that athletic interests as fostered in the schools of England, and more and more in America, making an allowance for all the evils that can be charged to them, have had a tremendous influence in shaping and determining the character of the race. No boy can be at the same time a bummer and an athlete. Nine boys out of ten, with any sort of encouragement, would much prefer to be the athlete. Intercollegiate and interacademic athletics may possibly be carried to excess occasionally, but it is the lack of precisely this interest which is the most fatal defect in the young life of Germany. Doubtless the reason lies in the national temperament to a large extent. The inspiration for a new order of things must come from the outside. The schools filling as they do a place in the national life far greater than that occupied by our own schools, and exerting by all means the most potent of all the influences brought to bear upon the young, must, as has been clearly seen, force young men into a more active manner of living. Those who believe in school sports and school games will not be likely to believe that a number of hours per week more of perfunctory class work in gymnastics will do it; they will rather think that they will be likely to dull whatever interest the child may possess in athletic exercise and make it but a part of an obnoxious task. But that the necessity to do something is so strongly felt is certainly a marked advance. The young Emperor himself, with his ardent love of out-door pastimes and healthy recreations, and his undoubtedly sincere and deep interest in the young, can not fail to influence national sentiment in this respect in a most important and far-reaching manner. Güssfeldt, who is said to be inspired to a large extent by the Emperor, in his recent book, "The education of the German youth," says that of twelve hours a day, four or five should be given to intellectual training and the rest to free exercises, plays and games, gymnastics with apparatus, skating and swimming, dancing and sports, and lastly industries. His idea is evidently developed from the best schools of England, and it is to be noted that "gymnastics with apparatus" has a minor place in the system and the exercises which are proposed. "Free" exercises are undoubtedly what the German boys are greatly in need of.

THE TEACHERS.

Examination.—The Staatsprüfung (government examination) for teachers in Prussia has long been famous. It originated with Wilhelm

von Humboldt, and the regulations governing it have been modified from time to time, especially in 1831 and 1866. Before 1810 the method of appointing teachers was very loose. No certificate of fitness to teach was required. Favoritism was the prevailing principle.

The examination at present is held by one of the high examination commissions. The candidate must present his certificate for ripeness for university studies and with it the certificate of three years' attendance at university lectures. The examination itself is both oral and written. Fitness to teach in the gymnasium is the standard set. A special examination is required for teachers in the real-schools, in modern languages, history, geography, chemistry, and the descriptive natural sciences.

The examination refers, first, to the candidate's general preparation for the teaching of philosophy, pedagogy, history, geography, and languages. This part may be dispensed with if unusually excellent academic certificates are presented. Second, to the special preparation for the particular branches the candidate wishes to teach. The certificate of fitness to teach—or *facultas docendi*—can be acquired in any one of the four following departments: (1) Philology and history; (2) mathematics and science; (3) religion and Hebrew; (4) modern languages. For written examinations every candidate must present a thesis on the general field of philosophy and pedagogy, and in addition one or more theses on his special subject. If that be the classics it must be written in Latin; if modern languages, in the language to which it relates. This thesis may be dispensed with in the case of graduates of the university with a degree of Ph. D. In case the examination is passed the candidate receives a *facultas docendi*, which is *bedingt* or *unbedingt*—conditional or unconditional. There are three grades, the first of which permits him to teach in the higher classes—*prima* and higher *secunda*, the second grade in lower *secunda* and *tertia*, and the third grade in the lower classes.

Trial year.—Having passed his examination the candidate is not at once installed in a position, but must first pass through a *Probejahr* or trial year, which has been required since 1826. He is assigned to some gymnasium or real-gymnasium, not to the lower school—in order that he may at least become acquainted with the methods in the higher schools even though his work shall lie afterwards in lower grades. He is under the charge of the director, and teaches from six to eight hours a week. He attends the teachers' conference, visits the various classes, and is given every opportunity to make himself perfectly familiar with his future calling. The director is specially enjoined not to regard the candidate as a means of relieving an overburdened teaching staff. As a rule the candidate receives no pay, but if he is required to do the work of an assistant teacher he is then entitled to corresponding remuneration. At the end of the year a report of his work is made out by the director and presented to and approved by the provincial school board.

Rank and work.—The question of the rank of teachers in Prussia is one that has been not a little agitated. According to ancient custom the teachers in the gymnasia were adorned with the following appalling list of titles: Prorector, conrector, subrector, subconrector baccalaureus, collaborator, coöperator, collega, cantor, and auditor. The divisions now existing are much simpler: Ordentlicher Lehrer (ordinary teacher) and Oberlehrer (higher teacher) and Director. The title of Oberlehrer or higher teacher may be held only by those who in addition to the qualifications for the middle classes have the ability to instruct in at least two main branches up to and including prima. The title of professor may be awarded as a distinction of Oberlehrer, in which case they rank equal to assistant professors in universities. Directors rank as full professors in universities and have a high social position. The directors teach from twelve to sixteen hours per week, the higher teachers from twenty to twenty-two hours per week, and the ordinary teachers from twenty-two to twenty-four hours per week.

Appointments.—At the end of his *Probejahr* the candidate gets his appointment. The ordinary teachers are appointed by the provincial board, the higher teachers by the same with the approval of the minister of education, and the directors by the Crown, through the ministry in all Crown patronage institutions. In schools of municipal or private patronage, the Crown's assent is required. All directors and teachers, however appointed, are required on installation in office to take the following oath:

I swear to God the Almighty and Omniscient after I have been appointed as — of the — to be submissive, loyal, and obedient to His Royal Majesty of Prussia, my most gracious lord, to fulfill all the duties obligatory upon me by virtue of my office conscientiously and according to my best knowledge, and to faithfully observe the constitution. So help me God.

Material conditions.—The salaries as a rule are small, judged from an American standpoint. The general scale is, for directors, from \$975 to \$1,350 per year; for teachers, from \$375 to \$975 per year. These figures are supposed to represent the total income; in case a house is provided 10 per cent is deducted from the salary. There is an ascending scale with length of service. According to the law of the 1st of March, 1833, teachers disabled from further duties receive pensions as follows: For ten years of service fifteen-sixtieths of the salary with increase of one-sixtieth for each additional year of service until the total reaches forty-five sixtieths. The trial year and time spent in military service is counted toward the pension, and the time spent in the field before the enemy is reckoned double. After the age of 65 all are entitled to pensions and are liable to receive them and be relieved from active service without requesting it. They are not prohibited from holding another employment (*Nebenamt*) along with their school posts, but must get permission to do so, and it must be such as not to interfere with their school duties. They are at liberty to give private

instruction as much as they please. They are almost absolutely secure in their positions. The authority of the ministry extends no further than reprimanding and stopping a month's salary. The directors and higher teachers are under the jurisdiction of the court of discipline for the civil service at Berlin, a judicial body composed partly of members of the supreme court. Any complaints regarding the dismissal of a director or higher teacher must be tried before it. From the sentence of the court there is an appeal to the minister, who must appoint two referees, one a member of the department of justice, to hear the appeal, and their decision is final. Complaints involving the dismissal of ordinary teachers are tried by the provincial school board acting as a court. From the sentence of the board there is an appeal to the minister, who appoints one referee, and the referee, before deciding, must take the opinion of the court of discipline.

II.—THE REFORM AGITATION.

No attempt will be made here to trace the entire course of the agitation for reform of the school system. Reforms have continually been in progress in the system itself and outside agitation has been continually going on. Nowhere have school questions been more thoroughly discussed than in Germany. Especially, however, within the last ten years, that is to say since the school system was crystallized into about the form that it retains to-day, has the German public been flooded with a great mass of pamphlets, brochures, and articles in journals attacking or defending the existing state of things. As the distinguished president of one of the most prominent reform associations, Dr. Preyer, said in his inaugural address, "one thing at least is certain, that every possible shade of opinion, every conceivable idea, every practicable and impracticable scheme has at least had a hearing and been brought to the attention of the public." It is scarcely conceivable that any other plan remains to be suggested. Many of the suggestions have been wild and visionary, many more have been revolutionary when viewed from the standpoint of the classical scholar, and many have been the calm and thoughtful utterances of experienced school men, indicating in what direction needed improvements could be made without a revolution. We can get no idea of the scope and importance of these discussions by comparing them with anything in the United States. So much local option in school matters prevails here that the national agitation on these questions that stirred Prussia, and indeed all Germany, would be with us simply impossible. In order to understand anything of the national significance of this movement for Prussia, the school organization and the vast importance of the higher schools in the national life must be continually borne in mind. The agitation has had something to do with the common schools, but we shall treat here only the higher or intermediate schools. Without making any attempts to analyze the vast body of literature on this

subject or to represent the almost innumerable ideas that have come to the surface, we shall simply attempt to indicate the marked and enduring tendencies, the strong and lasting, because well founded, movements.

The agitation falls naturally into two great divisions, first, that which concerns itself with the school organization and with the external school relations, with the relations of the schools to each other and to the government and universities; second, that which refers to what we may call the internal affairs of the schools, such as hygiene, frequency of classes, etc., matters of equal importance to all kinds of schools and totally disconnected from the other class of questions.

In regard to this latter class of questions the agitation has not been so much in the nature of a conflict as of an awakening and arousing of the people to an appreciation of existing evils and a desire for reform. The speech of the Emperor brought prominently to notice a new idea, namely, the duty of the schools to combat social democracy, which seems to have been original with the Emperor himself and does not fall properly under either of the heads mentioned. But this idea, coming as we have just said from the Emperor at the beginning of the conference, had no part in the preceding agitation, and indeed it may be added that it is doubtful whether it has had much influence in a practical way, although it did undoubtedly revive the national spirit in the schools and remind them forcibly of their duty to educate citizens and not merely to produce scholars.

Questions of external relations.—These refer to the general standing of gymnasiums, real-gymnasiums, and real-schools, the value of each to the nation and to the individual who receives their instruction, and the rights which each give to their graduates. The system as it existed up to the time of the conference was shaped so far as possible to emphasize the difference between these various schools and so far as possible to isolate each from the other. Transfer from one to the other was not easy, and especially transfer from one of the schools without Latin to one of the schools with Latin was practically impossible. The difficulties in the way were such as practically to prohibit any such change. The parent, therefore, had to decide when his son was nine years old as to his future career. If he sent him to the gymnasium, to be sure, he would be qualified for most of the desirable avenues of life, but should he later show marked mechanical abilities and evince a decided taste for a technical profession he must supplement his gymnasial work with a considerable amount of drawing and mathematics. If we consider the amount of work required of the gymnasial student and the military service which he must necessarily go through, we may understand how difficult it is to secure time for such supplementary study. If the father decided, however, for the real-gymnasium or the real-school, the boy was at once cut off from all of the learned professions, including to a great extent the teaching profession. The decision was therefore made when

the boy was nine years old and he had very little choice if any in the matter himself. There were not a few who recognized the disadvantages of such a condition and advocated the union school as a common substructure for all three existing classes of higher schools. The second question laid before the school conference had reference to such a common preparatory school. Such a school should take the pupil from the age of nine to fifteen through a course that would prepare him with advantage to turn after that period in the direction that his tastes and aptitudes then seemed to indicate. It would remove the necessity of deciding on the profession from the ninth to the fifteenth year.

This was one of the main points. Another referred to the privileges accorded to the graduates of the higher schools. The graduates of the gymnasiums, as before shown, possessed far greater privileges than the graduates of the real-institutions. The advocates of the latter insisted that no proper test could be made of the efficiency of the real-schools as compared with the gymnasiums, so long as the former were so heavily handicapped by the unfavorable conditions under which they worked. Parents, when somewhat undecided, would naturally choose the school that gave the greatest privileges to its graduates, and this fact alone was sufficient to account for the greater number of gymnasiums and larger attendance upon the same. For graduates of the real gymnasiums the right to study medicine, at least, was claimed. This had been claimed as far back as 1882, when the real-gymnasium received its present form, but was not granted. Professional men, as a whole, however, all being graduates of gymnasiums, insisted that the gymnasial training alone could give a proper preparation for the study of a profession, and that it would be bringing imperfectly trained men into the professional ranks of the country to widen the door that led to professional life. Prominent physicians, nevertheless, for example Dr. Freund, professor in Strasburg University, advocated the admission of real-school graduates to the study of medicine. This matter also came before the conference in question thirteen. Here the battle raged between the advocates of the old humanistic culture and the friends of the modern realistic culture. Associations were founded and journals inaugurated in the interests of both sides. "*Der Schule, nicht dem Leben, dienen wir*" (we serve the school, not life), was said to be the watchword of the classical schools. They were taunted with being entirely out of touch with practical life. They replied by declaring that their training was the best possible training for all possible callings; and, if it were not that "man should not live by bread alone," that there were other things to be considered than merely material welfare, and that the nation had not simply to be instructed, but to be educated, to be brought up. They said, moreover, and this no one could deny, that classical training had brought Prussia to its present high position. Further, Prince Bishop Dr. Kopp undoubtedly expressed the conviction of a great number of

the educated class in the following words, uttered by him before the conference:

I can not decide, gentlemen, to surrender the fair chapter on moral and intellectual power in the nation to a perhaps risky speculation. I am rather fully and completely conscious of the responsibility with which I sit here, and, therefore, I say I would rather see the existing management of education on the whole preserved, and I conclude on that subject as follows: If I am mistaken in this, gentlemen, this mistake does not seem to me dangerous, for from this mistake have come the best guiding and directing powers of a people which, in the hardest dilemmas, has accomplished the most difficult task that history and Providence ever set before a nation. But if the gentlemen, with their best meant principles and plans, are mistaken, they bear the heavy responsibility of having shaken the foundations of the intellectual and moral power of the nation.

Internal questions.—Chief of the questions under this head and one which more than any other touched the people at large and awakened popular interest in school reform was the “*Ueberbürdungsfrage*,” or the question of overloading or overpressure. It is not necessary to expatiate upon this question here. The programmes of the schools and the remarks of the Emperor in his opening address are sufficient to show that an amount of overpressure existed which would seem enormous by our standard. The Germans are a patient people, accustomed to endurance and hard work, and they were therefore slow in awakening to the consciousness of the fact that in their zeal for great accomplishments they were exceeding their strength and exhausting their youth. But finally they did awaken to this consciousness. This was a matter which touched all schools alike. It came before the conference frequently, but whether the conclusions of the conference accomplished much in the way of relieving the pressure is a disputed point.

School hygiene, as a question closely connected with the preceding, also received much attention. The enormous prevalence of near-sightedness and the startling number of suicides among school children could not fail to produce an impression. Recent Prussian statistics have shown that in four years three hundred boys and four hundred and nine girls under fifteen years committed suicide. The near-sightedness became so serious that the minister of education, von Gossler, asked Dr. Schmidt-Rimpler, the celebrated oculist in Göttingen, to draw up a list of recommendations for diminishing the near-sightedness so prevalent in German schools.¹

The question of better gymnasium instruction connected itself closely with the question of hygiene. As regards the instruction itself, it was held that the classes were too full; that the schools were too full; that

¹The regulations were as follows: (1) Teachers must acquire a knowledge of school hygiene; (2) That a medical attendant should be attached to the school staff and practically inspect not only the school building, but the individual pupils; (3) Sending practical instructions to the pupils to inform them of the best position of the body in reading, writing, and studying; (4) Abolishing the afternoon session so far as possible and allowing greater exercise in the open air; (5) Abolishing written tasks at home; (6) Not allowing the school course to extend over too many years.

the positions of the teachers were not satisfactory, and that German was not well enough taught. The following, from paragraph second of the constitution of the General German Association for School Reform, summarizes the chief points of attack of the agitators. The objects of the association are given as follows:

- (1) Common preparation for the higher schools (this refers to the common or union six-class schools before mentioned).
- (2) The elevation of German to a central point of instruction.
- (3) Better school hygiene and greater care for the physical development of the youth.
- (4) Equal rights for real-institutions and gymnasiums the first prerequisite for thorough school reform.
- (5) Better preparation of students for their later calling as educators and teachers.
- (6) Simplifying the system of examinations.
- (7) Greater coöperation of the parents in the duties and rights of education.

Dr. Preyer's address.—The following extracts from the address of Dr. W. Preyer, president of the General German Association for School Reform, formerly professor in the University of Jena, delivered in the constitutive assembly of the union, in 1889, illustrates the position of the more thoughtful reformers and gives a valuable survey of the reform agitation:

The present movement, by reason of the refusal of just demands, has reached a turning point; it is spreading more and more over all Germany; it is ever growing more powerful; and should I be required to characterize it in a single phrase, I would say *it is irresistible*. * * * But the standard-bearers of the school-reform movement are not to stand still. The government itself has declared that it has not yet come to "a full determination" concerning certain very important questions.

The greatest enemy of school reform in Germany, indifference, has actually been driven out of the field.

That party also which came into prominence through the declaration of some professors of the University of Heidelberg has lost respect and following in many circles from the very first moment on account of an actually false affirmation. The phrase that, without foundation, was presented to us as a fact, that foreign lands often envy us on account of our humanistic gymnasium, does not correspond to the truth. What foreign lands? England perhaps? In London it is entirely optional with the candidates for medicine and law whether they will study Greek or not, and in all Great Britain most excellent care is taken for the bodily development of the scholars, much better than with us. I am at a loss to know who that are capable of judging in that land still think favorably of our present gymnasium.

And France? Many of my writings have been translated into French, and attention has then been called to the fact to what an extent the faults brought forward by me and others are to be complained of in the French schools. Yes, in part, the same criticism has been made there as here. But there can be no doubt that French is brought much more into the foreground in French schools, and English in the English schools, than German in the German. The foreigners surpass us in this respect, as they do in all that relates to the cultivation of a national sentiment in the schools.

In Italy no one acquainted with the conditions wishes to introduce our humanistic gymnasium. As representative of the University of Jena at the eight-hundredth-year jubilee of the University of Bologna, where most eminent scholars came together from all quarters of the globe and all the lands of Europe, I had the best of

opportunities to convince myself how much the esteem in which our gymnasia were formerly held in foreign lands, and especially in Italy, had fallen. This is true also in Austria, in Hungary, in Denmark, and in Holland. If we had such a suitable school system as Sweden many complaints would be silenced. Only in Russia are they attempting at present to introduce strict old classical gymnasiums, in the hope of counteracting nihilistic exertions, obviously. It is no secret how little sympathy the ministry in St. Petersburg has from intelligent, cultivated Russians in this effort.

The address, which, according to its real contents, was not aimed at all against a reform of the gymnasia, has only attained a significance that is indeed ephemeral, from the fact that it was intended from the first as a counter-demonstration to the great petition, having more than 22,000 signatures, to the Prussian ministry. But it will not in the least weaken the lasting effect of the latter. Rather will this great memorial, conceived by the deputy M. von Schenkendorff, who has deserved so much from the friends of school reform in other ways, gain still greater significance, since, in spite of all efforts, only 4,000 men express themselves openly against it. I regard the monster petition, which was alike excellent in form and content, as an unmistakable proclamation of the nation, as a fact in the history of civilization. Behind every signature stand at least fifty who approve. And even if nothing practical is gained by it, we gain at least this: We know what backing we have among the people, among the learned and the practical, in the city and country population, in our efforts to improve the present schools. In fact, about 300 teachers in gymnasia, about 300 teachers in universities, about 300 clergymen, and about 1,500 physicians signed the petition.

Whoever has signed his name once does not take it away, but brings others. So I think these 22,409 German men form a natural union for the further advancement of school reform.

There are, it is true, many reform associations in Germany with similar aims; considered fundamentally, they do not stand in hostile opposition to one another, but they bring different views of the same question to a clear expression; they are all united in this, that the condition of our higher schools can not remain as it now is, and that is the chief point. * * *

We must first of all strive for this end: to elevate the instruction in German, in German history, literature, and knowledge of home. The subject really ought to stand in the very center of all studies. With the strengthened national feeling arising from the union of Germany, it is necessary to take account of this demand. Not that the number of hours of instruction in German must everywhere be increased at the expense of other branches, although I should hold that also very desirable, but first of all in all branches, and especially in the foreign languages, more attention must be paid to the speaking of German, and at every occasion, and especially in using the classical implements of culture, the advantages that our language possesses over the others must be brought forward. Attention must once more be paid to the history of its development, as was the case when I was still in Prussia. Further, Germany must take the precedence of all other lands in historical and geographical instruction. In the reading books and compositions exercises about foreign subjects must give place to home topics. The glorious history of the Hohenzollerns must be presented in the lowest classes, and faithfully repeated again and again. By this means love to the Fatherland and loyalty to the King will be early awakened and nourished.

Next to a stronger emphasis of German we must aim at a physical development which shall rest upon physiological grounds, shall consider as much as possible the entire nature of man, and which shall bring with it a better school hygiene. The sphere is a large one, and since a physiological pedagogy does not yet exist, the determination of the chief points—for example, how far school physicians are to co-operate—still demands a great deal of labor. In like manner the succession of studies, the suitable alternation of gymnastics, singing, and drawing lessons with the more

severe brain activity must be theoretically regulated as the case may demand. It must come to the point when from our schools there shall go forth not only cultured and healthy, but also alert, determined, skillful, muscularly strong young men in greater numbers than is now the case. The German race is distinguished above the Romanic in the last respect, and this inheritance must not be diminished by the schools. The material for the army must not be allowed to grow poorer in the case of the one-year volunteers; and if not everyone of the latter can be an athlete, yet the crooked sitting, the wearing of spectacles, and the quite too frequent muscular weakness in this category can be combated with great effect in the earlier years.

But, in order to break a path for these reforms, a better preparation of the teachers during their university studies is indispensable. Every student must have opportunity for the lectures on the constitution of the body and intellect of those whom later as teacher and educator, even if only as father, he is to perfect as human beings in the fullest meaning of the word. The physiology and psychology of the child, and psychogenesis are, it is true, not yet fully differentiated as independent sciences, but they form the natural bases of every future system of pedagogy. In spite of the differences of individual development there are general laws of development and education of a physiological nature.

A theologian, a philologist, a historian can not measure the fundamental importance of these requirements until he has made himself, to a certain extent, acquainted with them. Up to the present that has seldom been the case. No matter how often pedagogy is designated as a philosophical science, it actually is and remains applied physiology and applied empirical psychology, and truly of all the applied sciences the most complicated and difficult in application. For if we were in harmony as to the best principles and methods for directing the development of the child, so that he should develop into the most perfect man possible, we would have reached the highest point that any science can reach. But in order to discover those principles and methods the future teacher, before he enters upon his career, must become to some extent acquainted with the material upon which he is to exercise his influence, and that must be done in the seminaries. The physician investigates and treats the sick long before he begins to practice. Why should not the teacher, to a like degree, before he enters upon his practice instruct and train children?

There must be in the future a greater participation of the parents in education, and especially in primary education. When their children are attending school they have the prime duty of lightening the difficult task of the schools in every possible manner, especially by increasing the respect of the child for the teacher, by preventing an overloading with private lessons, by strict discipline in the maintenance of good morals and the culture of the religious instinct, by keeping them away from the many enjoyments suitable only for adults, and from the strong influences of our modern life. In short, the parents must bring up their children in harmony with the schools. In exchange they may well claim as their right that they shall not always be compelled to have their sons study Greek and Latin nine long years, if they wish them to enter the service of the state or to have them educated for the profession of medicine. This right of the parents is a cardinal point in the whole question of school reform in its legislative aspects.

The equalization of the humanistic gymnasia, the real-gymnasia, and the higher real-schools, at least that of the two first, with reference to qualifying for university studies is the single demand of the German Union of Real-Schoolmen, which has over 3,000 members, and has existed since 1875. This is a necessary condition for further and more thorough reforms and is demanded by warm friends of the old humanistic gymnasium.

The number of graduates of real-gymnasia who learn Greek in a supplementary year or year and a half and then obtain the certificate of maturity of a humanistic gymnasium is ever increasing and the gymnasium is being circumvented in this manner. We must therefore come to the view that the humanistic gymnasia will

be damaged in case we continually force upon them material that is unsuitable, and the real-schools will retrograde because they have not enough privileges. If the humanistic gymnasia could not stand this equalization in regard to external relations, then they surely would have outlived their usefulness. The state has need of an army of officials that has a much more intimate knowledge of the present and the real than of the Greek and Latin of antiquity.

But it is not the intention that the humanistic gymnasia shall be gradually abolished. On the contrary, they must have an opportunity to show how capable they are of living without a monopoly, in free competition, and what they can accomplish if they return to the earlier and more classical organization that was retained till 1882. Moreover it is intelligible that the demand for equal privileges for the old and new gymnasia finds many highly cultured opponents, for it is easily looked upon as a special interest of the Real-Schoolmen's Union. It is indeed for the real-gymnasium a question of vital moment. These will perish without equal rights with the humanistic gymnasium. But the question is a much deeper one than that of the prosperity of a hundred schools. Here the old and the new generations come into collision. Here the old ideas of an encyclopedical, cosmopolitan, old classical culture, and the modern ideas of individual, practical, national education come together. The question is, shall only that man still pass for highly educated who is instructed according to the principles of the seventeenth century? Shall the study of dead languages still be given the preference? Shall the German still seek a better intellectual home in Athens and in Rome? Or shall, as we desire, the modern culture, corresponding to the present and to the truth, based upon scientific principles, be recognized by the state alongside of this other form of culture? Shall an old prejudice continue to be officially cherished, so that both kinds of gymnasia pine, or shall it fall, so that new life is put into both? All this lies in the demand for the just external equalization of the gymnasia and real-gymnasia. This equalization is already actually accomplished in popular opinion. A graduate of the real-gymnasium with the grade "excellent" in the chief branches is in fact better educated than a graduate of the humanistic gymnasium who just gets through.

A simplification of the examinations will also be necessary, both for the scholars and the teachers, in different directions, in the final examinations, of the gymnasia, in the examinations for the privilege of one-year volunteer service, in the examination for head masters, for admission to the study of medicine and other professions, in order that the judgment may not be injured by overburdening the memory. * * * As a further aim of the school-reform agitation we must keep before us a greater independence in the administration of education and a greater participation of specialists. The ministry for spiritual, educational, and medicinal affairs is too large. A single man, even the most gifted, can not direct it continuously in all its parts with the same thoroughness. In a state like Prussia, containing large numbers of both Catholics and Protestants, the oftentimes very troublesome ecclesiastical affairs, the schools, from the common schools to the universities, and the care of the public health,—to know and to further all this is at present too much for one minister. Therefore suggestions have often been made for the establishment of a ministry of education. It will come to that in the future. * * * If the church and the schools, which formerly were united, have taken divergent courses of development, then a corresponding division of labor at the center of government will have to be introduced, and the sooner the better. It is a matter of course that experienced schoolmen should coöperate in an important way; but it does not seem to be necessary that the minister of education himself should be a schoolman. He might be a lawyer, or a physician, especially if the health department remains to be combined with the department of education. * * *

The new German school.—The objects of the association of which Dr. Preyer is president, and of the prospectus of its organ *The New Ger-*

man School, are here given to further indicate the object and scope of the movement.

Its objects are the following:

- (1) Uniform preparation for the higher schools.
- (2) Elevation of German to the focus of instruction.
- (3) Better school hygiene, and greater care of the physical development of the young.
- (4) Equal privileges for the real-institutions and gymnasia as an immediate condition of a thorough school reform.
- (5) Better preparation of students for their later calling as educators and teachers.
- (6) Simplification of the system of examinations.
- (7) Greater participation of parents in the duties and rights of education.
- (8) Unification of all efforts for school reform.
- (9) An independent administration for educational affairs under a more complete direction of specialists.
- (10) An educational code.

The following is taken from the prospectus of the paper *Die Neue Deutsche Schule* (The New German School):

Die Neue Deutsche Schule addresses itself to parents, teachers, and all people of culture with whom an interest in the present functions of education and instruction may be presupposed. It will offer a common central point for the present agitation for school reform, and unite the parties which seem to stand opposed to one another but in reality are all laboring for the same end, which is the introduction of a national German school, corresponding to the spirit of the age. It will bring to notice the principles according to which education naturally shapes itself and makes itself correspond to the spirit of the science of to-day. It will therefore exalt the value of the modern sciences for education and instruction. It will take the ground that instruction in education and teaching must have an independent position in the higher schools, and that a suitable pedagogical training, not merely a training in a specialty, must fall to the share of every high-school teacher. We demand at the same time that only teachers educated for educating shall approach German youth; for such only can safely watch over them, and protect them from those injuries that, in the shape of pedagogical misconceptions and hygienic errors of all kinds, injure the young, etc.

III.—THE CONFERENCE OF DECEMBER, 1890.

Preliminaries.—In 1849 the Prussian minister of education, Von Ladenberg, called together in Berlin a school conference for fixing general standards of instruction, to which were summoned the directors and instructors of gymnasia and real-schools. In October, 1873, another conference was held at the same place, likewise under the auspices of the minister of education. Neither of these meetings had any immediate practical results, but their debates were published and furnished most valuable material and wholesome incentives to the people. "These foreign governments," says Arnold, "which we think so offensively arbitrary, do at least take—when they administer education—the best

educational opinions of the country into their councils, and we do not." It was, therefore, not without precedent, and quite in accordance with the principles that had always prevailed in Prussia, that the Prussian minister of education, Von Gossler, should summon a conference composed of experienced schoolmen to discuss the questions agitating the public and to establish principles that should serve as the basis of practical legislation. The idea of uniting the greatest opponents in the school question was first mentioned by the minister on the 18th of March, 1890. On the 20th of March he added that it was his intention to unite typical representatives of different tendencies, not with the idea that they would destroy each other, increase the confusion, and finally conclude that it was best to let things stay as they were, but in order that they might freely express their opinions to each other in a commission governed by parliamentary rules, instead of in great popular assemblages. Details of the plan were not made public until the following October. On the 18th of October the educational minister issued an order directed to the different royal departments, and to the royal provincial school colleges at Berlin, which contained, among others, the following documents:

ORDER OF THE FIRST OF MAY, 1889.

I have for a long time been occupied with the thought of making use of the schools in their separate grades for combating the spread of socialistic and communistic ideas. The prime object of the schools will ever be to lay the foundations for a sound comprehension of both civic and social relations by cherishing reverence for God and love for the Fatherland. But I can not fail to recognize that in a time when the errors and misrepresentations of social democracy are spread abroad with increased zeal, the school is called upon to make increased efforts to advance the recognition of the true, the real, and the possible in the world. The school must endeavor to create in the young the conviction that the teachings of social democracy contradict not only the Divine commands and Christian morals, but are moreover impracticable, and in their consequences destructive alike to the individual and to the community. The school must bring the new and the newest history of the times more than hitherto into the circle of the subjects of instruction, and show that the power of the State alone can protect for the individual his family, his freedom, and his rights. And it must bring the youth to know how Prussia's kings have exerted themselves to elevate the condition of the laborers in a continuous development from the legal reforms of Frederick the Great and from the abolition of serfdom to the present day. Moreover, the school must show by statistics how considerably and constantly in this century the wages and condition of the laboring classes have improved under this monarchial protection.

In order to come nearer to this goal, I count upon the complete coöperation of my ministry of state, and while calling upon it to take the matter into further consideration, and to make to me definite propositions, I wish to recommend the following points for special consideration:

(1) Will it be necessary in order to make the instruction in religion more fruitful in the sense indicated to bring the ethical side of the same into the foreground and to limit the memory work to what is absolutely necessary?

(2) The history of the Fatherland, and especially also the history of our social, economic, and legislative development from the beginning of this century to the

present social and political legislation will especially need to be treated in order to show how the monarchs of Prussia have from the earliest times considered it as their special duty to grant to the population engaged in manual labor their paternal protection, and to advance their physical and intellectual welfare, and how also in the future the laborers have to expect justice and security in their earnings only under the protection and the care of the king at the head of an organized State. From the standpoint of utility, especially by the presentation of striking practical conditions, it can easily be made clear to the youth that a regulated government with a secure monarchical direction is the indispensable prerequisite for the protection and prosperity of the individual in his civil and industrial relations; that on the contrary, the teachings of social democracy are not practical, and, if they were, would subject the freedom of the individual to an unendurable constraint even in his domestic life. The pretended ideals of the socialists are sufficiently characterized by their own explanations to be made repulsive to the sensibilities and the practical sense even of youth.

(3) It is self-evident that the duty falling upon the schools in consequence must be suitably limited according to the scope and purpose of the different grades of schools, that only the most simple and easily comprehended relations can be presented to the children in the common schools, while for the higher categories of educational institutions the task is to be correspondingly broadened and deepened. It will be especially necessary to qualify the teachers to enter upon the new duty with devotion and to carry it through with practical skill. To this end the institutions for preparing teachers will need to undergo a corresponding enlargement in their organization.

I do not fail to recognize what difficulties will obstruct the performance of this task and that a long experience is necessary in order to determine what is right in all particulars. But this consideration should not prevent us from advancing the accomplishment of an object whose realization, according to my conviction, is of the highest importance for the welfare of the Fatherland. The ministry of state will accordingly set under way the necessary discussions, and after the termination of the same will report to me.

CASTLE IN BERLIN, *May 1, 1889.*

WILLIAM R.
PRINCE VON BISMARCK.

TO THE MINISTRY OF STATE.

The ministry of state, in a conference on the 27th of July, agreed upon definite proposals for carrying out the Emperor's wishes. The following are the propositions concerning the higher school system:

(1) In relation to the instruction in religion, regulations are to be issued for all classes of higher schools in the sense of the imperial order of the 1st of May, 1889. It must be enjoined upon the higher schools, especially upon the gymnasias, that the religious instruction is to be so imparted that emphasis shall be laid upon the living acceptance and the inward appropriation of the facts of salvation and the Christian duties, and special attention be given to the apologetic and ethical side. Along with considerable diminution in the amount taught, especially by cutting out the history of church and dogma leading to the taking sides in religious controversies, the instruction, so far as it is based on history, is to be limited to the occurrences of enduring significance for the ecclesiastical and religious life. The appropriate department of the educational administration will be engaged with the subject of instruction in the Catholic religion.

(2) In regard to instruction in history, regulations are to be issued for all classes of higher schools in the sense of the imperial order of 1st of May, 1889.

(a) The instruction in the history of the Fatherland is to be carried down to the

beginning of the reign of His Majesty and is to be extended beyond its former compass from the time of the Great Elector.

(b) The more important facts are to be introduced as early as the middle classes of the higher institutions.

(c) In the instruction in history the development of our social and economic conditions, especially from the beginning of this century to the present social and political legislation (care for the aged and invalid, 1889), is to be presented.

(d) This instruction is to be more extensive in the senior class of the complete institutions. In this connection the instruction concerning the destructiveness of social democracy is to ensue through and by means of a healthy understanding, without entering upon a detailed discussion of the socialistic theories. The impossibility of the social democratic efforts is to be demonstrated by the positive objects of social democracy, and to be put in intelligible shape for youthful minds.

(e) In consequence of the expansion of the historical instruction provided for in (a) to (d) the remaining material for historical instruction will be correspondingly diminished.

(f) The historical text-books are to be completed by suitable men by adding the corresponding material.

(3) Emphasis is to be laid upon the carrying out of the principle that history and literature are not to be explained in a formal and mnemonic fashion, but ethically and with reference to their essential meaning.

(4) The regulation for examining candidates for higher school positions is to be revised in the sense of the preceding provisions.

(5) In the practical preparation of the teachers (pedagogical seminaries, trial years, etc.) particular attention is to be paid to the preceding regulations.

By an order of the 30th of August, 1889, the king approved these proposals and recommended the minister of education to take the necessary steps for revising the school system in accordance with the same.

The order proceeds as follows:

In accordance with the above the duty falls upon the higher school system, in a more effective pursuit of its former objects, not only to equip those social classes that are called to exercise a critical influence upon the entire life of our people with the knowledge necessary to produce such results, but also to give them, by means of an education based upon Christianity and the national German spirit, a permanent tendency of the will and of the character. Therefore, above all, those subjects of instruction which are calculated to determine immediately the sensibility and will are to be employed to the greatest extent possible. Along with these duties common to all higher schools, the goals fixed for individual classes of schools are to be kept firmly in view. If, however, in this, not merely a more highly cultured personality, but also an intellectually composed and a morally confirmed personality is everywhere striven for as the result of the instruction, then all the scientific work of the higher schools will serve the ends of true education. This is universally recognized, but different views prevail as to the way that should be taken to reach this goal, and these views are in part contradictory. Therefore it has been recommended to ascertain through the joint deliberations of men of different positions in life which of the numerous proposals for improving our school system are justified and how the same are to be equalized, especially, however, how they are to be made available for school forms that have come down to us through history.

His Majesty the King has been pleased most graciously to approve such a deliberation, and preparations for the same are at present being made; as soon as the results are presented it will be considered in what manner and in what degree they are to be applied in shaping the programmes of the higher schools.

The invitations to the conference were dated the 31st of October, 1890, and read as follows:

In behalf of the deliberation of a series of important questions touching the higher school question in Prussia, I intend under the royal sanction to assemble a number of trustworthy men who belong to different callings and professions to a conference here in Berlin. Since I may presuppose in you, sir, an inclination to participate in this deliberation I take the liberty of inviting you most respectfully to be present at the opening of the same, Thursday, the 4th of December, of this year, at 11 o'clock in the forenoon, here in the building of the ministry of education, Unter den Linden, 4. I respectfully look for advice as soon as convenient as to whether I may count upon your presence. I reserve further communication concerning the questions to be presented to the conference and concerning the order of business.

VON GOSSLER.

MEMBERS OF THE CONFERENCE.

1. Dr. Albrecht, imperial higher school counselor, government privy counselor, Strasburg, Alsace.
2. Dr. Bertram, city school counselor, Berlin.
3. Dr. von Bodelschwingh, pastor, Bielefeld.
4. Dr. Deiters, royal provincial school counselor, Coblenz.
5. Count Douglas, mine-owner, member of the chamber of deputies, Berlin.
6. Dr. Eitner, gymnasium director, Görlitz.
7. Professor Ende, royal privy counselor, Wannsee near Berlin.
8. Dr. Fiedler, director of the higher real-school in Breslau.
9. Dr. Frick, director of the Francke institutions, Halle on the Saale.
10. Dr. Frommel, court preacher, military rector, Berlin.
11. Dr. Frowein, manufacturer, Elberfeld.
12. Dr. Göring, Berlin.
13. Dr. Graf, royal sanitary privy counselor, president of the Association of German Physicians, Elberfeld.
14. Dr. Güssfeldt, captain of horse in the reserve of hussar body guard, Berlin.
15. Dr. Hartwig, gymnasium director, Frankfort on the Main.
16. Dr. von Helmholtz, president of the Imperial Physical Technical Institution, Charlottenburg.
17. Dr. Baron von Heeremann, retired imperial counselor, Munster.
18. Dr. Hinzpeter, royal higher privy counselor, Bielefeld.
19. Dr. Holzmüller, director of the industrial school, Hagen.
20. Mr. Hornemann, higher teacher in lyceum 1, Hanover.
21. Dr. Jaeger, director of the royal gymnasium in Cologne.
22. Mr. Kaselowsky, director of the Berlin Machine-Building Company, commercial counselor, Berlin.
23. Dr. Klix, royal privy counselor and provincial school counselor, Berlin.
24. Dr. Koch, royal privy medical counselor and professor, Berlin.
25. Dr. Kopp, prince bishop, Breslau.
26. Dr. Kropatschek, retired higher teacher, member of the diet and of the chamber of deputies, Berlin.
27. Dr. Kruse, royal privy counselor and provincial school counselor, Dantzig.
28. Dr. Matthias, real-gymnasium director, Düsseldorf.
29. Dr. Mosler, prebendary, professor, Treves.
30. Dr. Paulsen, assistant professor, Steglitz, near Berlin.
31. Dr. Pachler, royal gymnasium director, Wiesbaden.
32. Dr. Schauenburg, real-gymnasium director, Crefeld.
33. Baron von Schenckendorff, telegraph counselor, member of the Chamber of Deputies, Görlitz.

34. Dr. Schiller, gymnasium director in the Grand Duchy of Hesse, professor and privy higher school councillor, Giessen.
35. Dr. Schlee, royal real-gymnasium director, Altona.
36. Dr. Schottmüller, royal privy councillor, professor in Zehlendorf, near Berlin.
37. Dr. Schrader, privy higher councillor, curator of Royal University, Halle-on-the-Saale.
38. Dr. Schulze, royal gymnasium director, Berlin.
39. Dr. Tobler, rector of the university, Berlin.
40. Dr. Uhlhorn, abbot of Loccum, royal higher consistorial councillor, Hanover.
41. Dr. Uhlig, gymnasium director in the Grand Duchy of Baden, professor in Heidelberg.
42. Dr. Volkmann, rector of the National School, Pforta.
43. Dr. Virchow, royal professor, privy medical councillor, Berlin.
44. Dr. Zeller, royal professor, privy councillor, Berlin.

Dr. Koch, in view of his other more pressing duties, was, at his own request, excused from participation in the deliberations of the conference.

In addition to the above the following representatives of the different government departments attended the conference and took part in its proceedings, but did not vote:

From the ministry of spiritual, educational, and medicinal affairs, Drs. de la Croix, Schneider, Stauder, Wehrenpfenning, Bohtz, Althoff, Höpfner, and Köpke; from the war ministry, Major Fleck, Dr. Werner, staff surgeon, Dr. Rehrmann, professor in the cadet school in Gross Lichterfeld; from the ministry for trade and industry, Privy Councillor Lüders; from the ministry of finance, Privy Councillor Germar; from the ministry for agriculture, domains, and forests, Dr. Thiel; and Director Matzat of the agricultural school at Weilburg.

It is not surprising that the ardent agitators for school reform, who had been led by the attitude of the ministry to expect a great deal from the Berlin conference, were no less disappointed than surprised when the above list was made public. They considered it "a packed conference." Whatever hopes they may have entertained they, for the most part, abandoned before the sittings of the conference began. Popular interest had been aroused and sustained by the expectation that at last important and radical changes were at hand. The friends and advocates of more modernized education were full of hope. The supporters of the old gymnasium were not free from apprehension. At last all parties were to have an official hearing, and the fittest would have a chance at least of surviving. As soon, however, as the constitution of the conference became public popular interest almost died out. "In fact, the lists of names and of questions contain the decision," were the words of an ardent advocate of the gymnasium. There could be no question as to the result. The list contained at least fourteen representatives of the strict gymnastical tendencies who differed from each other in their views as to the necessity of reform in the gymnasium, but were united in opposition to the real-gymnasium and its privileges. Dr. Eitner, of Görlitz, and Dr. Matthias, of Düsseldorf, directors of

combined institutions, were to be counted with them. Opposed to these fourteen or sixteen champions of the gymnasial standpoint were three representatives of real educational institutions, Dr. Schauenburg, Dr. Schlee, Dr. Fiedler.

Dr. Hornemann, Dr. Albrecht, and Dr. Holzmüller were all well-known opponents of the real institutions. All the most prominent representatives of the real-gymnasia, as, for example, Steinbart, Schwalbe, Schmeding, Krumme in Brunswick, and Dillman in Stuttgart, and Prof. Preyer in Berlin, were not summoned. All members of the congressional committee on education who had spoken in favor of the equalization of the real-gymnasia, like Seyffardt, Schmelzer, and Arendt, were also missing. On the other hand, the deputies Graf and Kropatschek, who had always opposed the wishes of the real-school, were included. There was one mathematician—Holzmüller, he a declared opponent of the real-gymnasia; no naturalist, unless we count the physicians as such; no teacher in a technical high school; no artist; one architect; no engineer; no forester; no merchant; one manufacturer, and one mine-owner. The association of real-school men had good reason to complain; its most violent opponents were summoned, and its chief advocates were not. Much might be expected, however, in the way of such reforms as did not involve a serious change in school organization. Schenkendorf, Eitner, and others might be expected to advocate warmly the cause of physical culture. Frick and Schiller would take ground for a pedagogical preparation of teachers. There was ground to hope that some measure would be taken against overpressure and the causes of near-sightedness. There was lamentation that no one appeared to plead the cause of drawing and art in the gymnasium. Some practical improvements in existing institutions might be expected from such a commission, but no radical changes. The friends of the new German school, however, expected little; and they would have been less disappointed than they were but for the energetic interference of the Emperor.

Order of business.—The order of business was as follows:

1. The convention has the object of affording to the administration of education by its proceedings concerning the questions specified in the programme in regard to the higher school system standards for judging the same.

2. The minister of education, or a deputy appointed by him, presides.

3. The proceedings extend, excluding a general debate, to each individual group of the questions presented, and will be introduced by the report of one or several reporters or referees.

4. The referees will be appointed by the chairman; the number of the same for each group depends upon his judgment.

5. The reports of the referees will, as briefly as possible, give a condensed survey of the views and demands coming under consideration. They must contain precise motions corresponding to the questions proposed.

6. Motions from the body of the assembly are to be given to the chairman in writing. The decision as to whether they are to be discussed lies with him.

7. The chairman directs the proceedings, determines the order of the speakers, and has the right to make, in advance, regulations as to the length of individual speeches and to close the proceedings when the subject of discussion appears to him exhausted.

8. As a rule, one speaker shall not have the floor more than once for each individual question. Exceptions are allowable only with the approval of the chairman. Personal observations are not allowed; the fixing of a definite time limit for the speeches is reserved. The referees have the concluding word before the vote is taken.

9. In preparation for voting, individual motions may be turned over by the chairman to a commission which he is to nominate.

10. A majority decides; as a rule, the voting is by name.

11. A stenographic report will be made of the proceedings, which, after it has been transcribed, will be exposed to view of the members in the bureau. The speeches will be presented to the speakers for revision before they are finally included in the report. The latter are bound to give their speeches to the bureau in the forenoon following the day of the proceedings.

12. During the proceedings the members are to preserve a strict secrecy regarding the same and are not to allow reports to come to the public press, either from themselves or others.

13. The chairman determines whether and how far during the proceedings a short summary of its progress is to be made public.

14. At the close of the proceedings the chairman decides whether the same shall be made public complete according to the stenographic report or in extracts or in a summary.

15. The minutes and printed matter coming up in the course of the proceedings will be given to the convention, one copy to each member, for the purpose of using them in his work.

The questions submitted to the conference were as follows:

1. Are the varieties of high schools existing to-day to be maintained in their present separation, or is it advisable to unite (*a*) the gymnasium and the real-gymnasium, (*b*) the real-gymnasium and the higher real-school?

2. Can a common foundation be provided for the three existing classes of schools (gymnasias, real-gymnasias, schools without Latin) or for two of the same? In the latter case is it recommended (*a*) to extend the existing uniformity for the three lower classes of the gymnasias and real-gymnasias to Lower Secunda (inclusive), and to introduce from Upper Secunda upwards the study plan of the higher real-school? (This is providing for a combination of the real-gymnasium with the gymnasium.) (*b*) Or to push forward Latin in the real-gymnasium to Lower Tertia, and to amplify the three lower classes

that do not study Latin into a higher burgher school? (This is providing for a combination of the real-gymnasium with the higher burgher school.)

3. Is it advisable to reduce the number of hours devoted to the ancient languages in the study plan of the gymnasia, and so to make it possible to reduce the total number of hours of instruction in the three lower classes, to introduce English as an elective study, and to make drawing obligatory above Quarta?

Should Latin composition as a prime accomplishment, and the written translation of Greek be dropped in Prima at the same time that this reduction of hours is introduced?

4. Is it advisable to retain in the study plan of the real-gymnasium the increased amount of Latin introduced in the year 1882, or should a lessening of the same and thereby a reduction in the total number of school hours be brought about?

5. Is it advisable (a) in places where there are only gymnasia or real gymnasia to introduce instead of Latin an increased amount of instruction in German and modern foreign languages, according to the local needs; (b) in places where there are only high schools that do not teach Latin, to add to their three lower classes according to local needs instruction in Latin; (c) to reduce all institutions with seven grades (progymnasia, real-progymnasia, real schools) to institutions with six grades; (d) to shape alike the study-plan of the real-schools and the higher burgher schools, and to arrange both so that without prejudice to the different methodical treatment of the subjects of instruction and to the termination of the course of education, the continuation of the same in the higher real-school shall be made easier?

6. Is it advisable to introduce in those institutions that are arranged with a course of study running through nine years an earlier relative termination after the sixth year of the course in the interest of the scholars that enter into practical life before the completion of the nine years' course?

7. Are further or new standards desirable for the furthering of successful education, with regard to the maximum size of the classes, the number of scholars and of classes allowed in each institution, the complete division of Tertia and Secunda in two classes, according to years, and the number of hours of duty of the teacher?

8. In how far is it possible, even with a reduction in the total number of school hours, by means of intensive methodical instruction, to transfer the greater part of the home work to the school, especially in the lower classes?

9. What is to be done for the further development of the instruction in gymnastics, which at present is for the most part given two hours a week and generally to large divisions, and what other provisions for the physical development of the youth are to be applied?

10. Can the final examinations be dispensed with? In case they cannot be done away with entirely, should simplifications be introduced, and what ones?

11. What changes are desirable with reference to the *scientific* training of the coming teachers in higher schools?

12. Through what means can the higher institutions of learning coöperate to the greatest extent possible with the family to influence the moral development of their pupils?

13. What changes seem advisable in the privileges (*a*) of the institutions with a course of study extending over nine years, (*b*) in the higher burgher schools (to be discussed according to the different employments).

14. If in the future the right to one-year service can be obtained earlier in the higher burgher schools than in the other higher schools by reason of the earlier termination of their course of study, and changes are introduced for the benefit of the higher burgher schools in regard to other privileges, then the need for this class of schools will increase.

What general rules shall be adopted for meeting this demand? (Combination of higher burgher schools with existing institutions, transformation of a part of the latter, building of new higher burgher schools by the state or with state support.)

THESES OF THE REFEREES: DR. GÖRING'S VIEWS.

The minister of education assigned these questions to different members of the conference to report upon, and the members so appointed prepared theses containing a summary of their conclusions. These theses were handed in to the minister before the conference assembled and by his order printed for the convenience of the members. In the main they were brief summaries in regard to the technical points at issue, each referee confining himself to a few short paragraphs. Dr. Göring, however, the representative of the Association for School Reform in the conference, apparently took advantage of the opportunity afforded to present his views on the entire educational system, although the question assigned him to report upon, the eighth, was one that apparently offers little scope for wide digressions. Dr. Göring is the author of a scheme for a new German school that has attracted no little attention, and for carrying out which considerable sums have already been subscribed. It seems worth while therefore, to give his thesis in full:

1. The entire instruction must further independent thinking, must lead to a moral and religious culture, aid the development of character, strengthen the will, exercise fancy and memory in the right proportion, sharpen the senses by a far-reaching use of material for object lessons, and avoid all that injures the physical welfare of the scholar.

2. Care is to be taken therefore that the knowledge of the scholar has a symmetrical coherence. It becomes thereby a moral power and tends to free the character from hesitancy and indifference in judging moral questions and in acting according to moral principles.

3. The same amount of time must be allowed for the recreations of the scholar as for his work, and in such a manner that the afternoon remains free for gymnastic exercises and exercises in manual training, and that the association of the scholar

with his family and with companions of the same age is not too much limited by home exercises.

4. All subjects of instruction are to be arranged connectedly, and such preparations are to be made for every new subject that the scholars shall approach it with interest and as much natural eagerness as possible. In regard to the chief subject of the gymnasium, the Latin language, this object is difficult of attainment in the lower classes, since a dead language cannot be made interesting to a boy of 9 years without the stimulus of artificial conceptions.

5. The independent activity of the scholar is to be increased by allowing him to find out the facts of science for himself so far as this is possible through reflection. Systematic lectures by teachers are to be avoided.

6. Limits are to be set to that sort of activity which dulls the interest of the scholar and forces him to external appropriation of the subject matter; namely, learning by heart.

7. Every teacher must become accurately acquainted with the contents of his pupils' minds before introducing them to his subject, in order that he may build on to the existing knowledge and make what is already known the starting point for the treatment of the new subject.

8. All teachers of a class after the close of the day's instruction must determine the subjects and lessons for the following school day in a general deliberation and upon the ground of the amount accomplished in each branch, in order that one subject may stand in due relation to another.

9. The combination of the individual branches of instruction into a symmetrical organization is naturally accomplished by intrusting the entire instruction in each of the lower classes to one teacher. Unusually capable teachers should accompany their scholars from class to class, at least to the close of Quarta (singing, gymnastics, and manual training excepted).

The execution of this demand can not meet with difficulty on account of any ignorance of the teachers, for the total amount of knowledge possessed by a pupil in Sexta, Quinta, or Quarta is so small that any academically educated teacher can easily master it.

By transferring the entire instruction in each class to the hands of one teacher it will be made possible to have the instruction proceed from one symmetrical consciousness and to form again in the scholar a single symmetrical consciousness. This advantage possessed by the common schools through having a single teacher for each class can be gained also for the gymnasium.

The methodic training of future teachers in pedagogical seminaries will lighten and give artistic form to this method of instruction.

The additional work that would fall upon a gymnasial teacher gives no ground for declining this proposal. The tasks that are imposed on a boy can in no way overload a man. We must consider also the number of hours a teacher in the common schools requires for guiding his class in all the branches of instruction. The elementary subjects are not easier than the subjects taught in gymnasiums in respect to the demands made upon the teachers. Rather the ease of instruction increases with the higher scientific interest that the subjects excite.

Besides, the work of a gymnasial teacher does not always occupy the full strength of a man.

An increase in the work of teaching would limit the literary activity of teachers rich in leisure.

The carrying out of this demand brings the advantage that teaching power will be gained and the number of scholars in the classes can be diminished.

From that will arise the blessing that the individuality of the scholar can be carefully studied by the teacher, and that the scholars form a firm moral bond with the teacher. The special teacher often gives instruction in so many classes that it is not possible for him to penetrate into the nature of the scholars. Overloading of the

scholars is excluded by this means of instruction, since the teacher always knows what the scholar has to do in all subjects.

This method of instruction must also abolish that certificate of poverty of the system of higher instruction, the hour for assistance.

The one-sidedness in the influence of one teacher upon the pupils is not so harmful as the dissipation of the scholars' consciousness through the system of special teachers, and it will be lessened by association with parents and comrades.

10. All teachers are under obligations to occupy themselves in the study of pedagogical writings, which furnish them landmarks for the development of a good method.

Every teacher must also make himself acquainted with the principles of hygiene and general physiology in order that he may in general, without calling a physician, keep the scholars free from injuries to health. The pedagogical preparation of teachers must in the future embrace these subjects.

11. Religious instruction is to be regarded as the central point of all instruction. All the other branches are to be taught with reference to this one. In it is to be sought the material source of a more intensive instruction.

12. In the lower gymnasial classes the chief emphasis is to be laid upon the narrative books of the New Testament in such a manner that they may be thoroughly understood and may make a real religious impression. At this point the learning by heart of biblical proverbs and sacred songs is to be avoided. Nothing is to be memorized except the Commandments, so that the entire religious instruction may fall inside the school, and there may be no trace of compulsion or mere memory work but that the recurring lesson may operate only to build up the character, sensibilities, and disposition of the boy.

The life of Jesus is to become the center of the boy's conceptions and must be presented to his mind in an elevated and inspiring fashion. The historical books of the Old Testament are to be read from the school Bible in Sexta and Quinta, in Quarta the doctrinal books of the New Testament, and in connection therewith the Psalms and Job.

Instruction concerning the existing laws of the land, political economy, and the care of the health belongs in the religious instruction.

13. As religion gives the divine type, so German poetry is to be regarded as the second subject in importance, since it represents the human pattern. In connection with religion poetry is to be treated in the lessons in history, geography, and natural history. Each one of these branches offers opportunities to illustrate some subject by a poem. Methodically arranged books of poetry are sufficient for school uses. In this subject also learning by heart is to be avoided in Sexta and Quinta. It is sufficient that the instruction in singing impresses on the memory the songs that the scholars sing. In this way singing is connected with the chief branches, since in the singing lessons the songs to be sung are explained, among them religious songs, chorals, and patriotic songs. Memorizing is made much easier by singing.

14. The entire instruction in German broadens the moral and religious conceptions of the boy by the reading of statements from religion, human life, political economy, history, geography, the animal world, the plant world, the mineral kingdom, and science. These materials for reading prepare for the instruction in these various subjects, and the ideas thus gathered the teacher, by many kinds of object lessons, by experiments, and by systematic instruction, shapes into a coherent ideal.

In reading in the classes accurate tests should be made as to how far the subject matter is understood. The scholars must grasp connected readings and learn to understand books in order that they may educate themselves by private reading, in case that becomes necessary. The teacher, too, must always indicate the connection of what is read with the moral and religious center of the instruction, in order that as early as possible the danger of disconnected, indiscriminate reading may be prevented.

The scholars must read with expression, following the example of the teacher. At the same time they are not always to be confined to their reading book, but are to be accustomed to follow and understand matter read to them by the teacher or a scholar out of a book brought into the class by the teacher.

Independent, logical, and grammatically correct speech is to be aimed at. The scholars are to be admonished from lesson to lesson to express themselves extemporaneously in connected fashion, and moreover outside of their seats, facing the class. They will speak only concerning that which has been thoroughly treated in the class.

German exercises are to be prepared in school. A theme is never to be given for a composition whose substance is not thoroughly understood by the scholar. A composition can be written every week. The copying in clean handwriting alone is to be done at home or in the writing lesson. In this way the German composition becomes the most important aid in carrying through methodical instruction. The German composition represents the results of the work in all other branches.

Grammar is never to be treated in any other way than in connection with reading and conversation. From Sexta to Quarta a text-book of grammar is to be kept at a distance. The home work is to remain completely free from grammatical exercises.

The learning by heart of poems and prose is to be left in general to the free will of the scholar. One short narrative poem that has been treated in the lessons can be memorized monthly. The scholars are to aid the teacher in testing what has been learned.

At the close of each school half-year a dramatic representation corresponding to the age and understanding shall be given by each class. All the participants are to volunteer for this work, which has the object of accustoming the scholars to good artistic delivery and to considering a work of art as a whole.

15. History occupies the third chief position in regard to forming moral and religious ideas, since it furnishes a picture of mankind in its actual existence, along with the ideal pictures of humanity presented by religion and poetry.

The memorizing of historical tales is unconditionally to be avoided in the lower classes; this carried to excess makes instruction in history a caricature. It may be agreeable to the teacher, but it brings sorrow and vexation to the scholar, without any gain in culture. Character sketches of historical personages are to preponderate. The most comprehensive use of object material is always to be made. These bridge over the abyss between the contemplation of the present and of a far remote past, and aid the comprehension. Such are pictures of persons, buildings, landscapes, occurrences, and geographical orientation on the map.

The history of recent and of the most recent times is to be given the preference. Books are to be read in Quinta and Quarta that depict the life of the German emperor.

Instruction in history refers in turn to the religious instruction through the comparison of historical characters with religious characters. Especially is every action to be judged according to its moral and religious worth, after the standard of the life and works of Jesus. That will form firm fundamental ideas, and will strengthen the religious and moral judgment.

16. The scholar is to be led to the study of Latin through a union of all the interests that he has acquired through his knowledge of the Roman Empire. In the lessons in religion the scholar has heard of the interference of the mighty Roman Empire in the history of Palestine. Much that is characteristic of the Roman Empire and the Roman people is connected with the birth, life, teachings, and death of Jesus. The scholar has further references to the history of Rome from his recollection of Old Testament stories, from German history, from the instruction in geography, from the monuments of the Romans, and from the remains of the Roman language in German words and phrases. Roman history must be presented to the scholar in its characteristic features before his interest can be awakened for the Latin language.

The instruction in Latin must be joined with connected reading. From this the forms and syntax are to be developed.

In this also the chief labor can be transferred to the schools, by employing in each lesson the new material that the teacher has offered in Latin and has had the scholars find out in practice sentences. The sentences are at first to be practiced orally; afterwards sentences will be written by each scholar on the blackboard in Latin, which the teacher has given in German. Finally, the scholar writes in every lesson in his copy book one or two Latin sentences which the teacher has given in German. The scholars correct their faults, after discussing the sentence. They aid the teacher in this work by correcting each other's books.

The home work consists only in impressing firmly the few new words which will be given to the scholars in each lesson.

A grammar of the Latin language is not to be allowed before *Tertia* is reached. The scholars will deduce the rules from reading the extemporization and the empirical material, and will impress them by exercises.

The attention directed to the blackboard is hygienically favorable since it requires the scholars to sit erect and practices them in seeing at a distance.

17. The instruction in Greek is to be carried on in the same manner.

18. In the modern languages exercises in conversation are to preponderate in the first year.

19. Natural history and natural science are to be limited to what is typical. In these all depends upon individual observation and experience. The instruction in the same is connected with religion by the demonstration of God as the Creator and Preserver of all. In the study of animals sympathy for animals is to be awakened as a command of Christianity.

20. Geography is to be limited to the reading of sketches characterizing the different lands and is to use object material as much as possible. The use and copying of maps must be practiced constantly. The latter falls under the head of instruction in drawing.

21. Arithmetic and later mathematics are to be treated with reference to the proverb, "All is arranged with reference to mass, number, and weight." From these subjects the scholar derives the conception of objective truth and that the laws of morals have an absolute justice. By this means the religious and moral understanding will be strengthened.

Arithmetic and mathematics start from the observation of bodies and go from the concrete to the abstract—number, point, line. The rational preparation for this process of thinking is furnished by the Froebel system of games.

Home work is excluded.

22. Drawing gives the scholar opportunity to make experiences about the size relations of planes and their relations to bodies, and thereby affords the basis in observation for planimetry and stereometry. Home work is excluded.

23. Hand exercises may not be merely mechanical, but must be practiced after Froebel's method.

24. Gymnastics, youthful games, and singing must cement a firm bond between all the scholars.

25. The transfer of the chief work to the school brings with it a limitation of the instruction to what is most important and typical, increases the independent activity of the scholar, sharpens his attention and presence of mind, concentrates his thoughts, excites his curiosity, and increases his feeling of power and independence. The teacher has always an oversight as to the true capacity of the scholar, which is not always the case where work is done at home.

26. All future teachers in high schools are to be methodically prepared.

OPENING OF THE CONFERENCE.

The conference met in Berlin on Thursday, December 4, 1890, at 11:15 a. m. A short summary, giving only the motions and decisions, was furnished to the press from day to day. After the con-

clusion of the proceedings, however, the stenographic report was published, making a volume of 800 octavo pages. It is obviously impossible even to condense this vast amount of, for the main part, most interesting pedagogical material into so small a space as is furnished by the compass of this chapter. We will attempt to show only the main movements and tendencies in the conference, together with some of the most memorable utterances of the distinguished educators present, and finally the decisions arrived at, with their significance, and the impression they made on the public of Prussia.

The first sitting was opened by Dr. von Gossler, minister of education, in the presence of the Emperor, in the following words:

May Your Majesty allow me surely from the heart and in the name of all present to express our most respectful and deepest felt thanks for the warm interest which you manifest in the education of our youth.

In this respect Your Majesty is treading in the footsteps of your enlightened ancestors. The Hohenzollerns have always regarded it as their right, but also as their duty, to influence immediately and decisively the development and education of the young. As early as the year 1573, your enlightened ancestor, John George, issued the celebrated visitation and consistorial decree, which determined for centuries the destiny of the schools of Brandenburg. At the close of his active life Elector Frederick William the Great issued the famous school order of Brandenburg, and moreover upon Lutheran foundations. His grandson, Frederick William I, issued in the first year of his beneficent reign the cabinet and school decree, which formed the basis of the system of education down to and into the present century. He cared for the schools unweariedly to the close of his rich life, and that which he did for the common schools still holds good in the Province of Prussia to-day. In his instructions for the Lutheran higher consistories Frederick the Great followed in the footsteps of his father. In 1763 he issued the celebrated general school regulation, and that which he had planned for the higher schools became law a year after his death in the well-known instructions for the higher school board. At that time there was accomplished in Prussia for the first time, as a type for all lands, a careful separation of the provinces of the school and the church in the realm of education. But our entire Prussian educational administration and legislation rests upon the famous cabinet order of Your Majesty's most illustrious great grandfather. This unfortunately too-little-known order of the year 1817 summoned the whole nation, in a really inspiring manner, to coöperate in the education of the young. The great deeds that Prussia accomplished under the leadership of her King proclaimed that the powers of the nation were preponderantly intellectual and ideal, and that only through a revival of the whole intellectual tenor of the people could that strength be obtained that secured to Prussia her lofty, but at the same time dangerous, position. As at that time Frederick William III summoned all classes of the people to coöperate in the revival of the nation, so has Your Majesty also in the memorable order of the 1st of May of last year summoned us, declared the schools competent and intended to coöperate in the revival of the people in those spheres which through the power of subversive influences have been brought into question. Your Majesty has not failed to recognize that the work of the school is indeed the most powerful, but at the same time the slowest and most wearisome, and that the beginning must be made with the teacher before the goal can be obtained within the school. Your Majesty has called our attention anew to the significance attached to the proper assimilation of religion, and in giving prominence to those periods in our Prussian history that have influenced the moral and religious culture of the people, and we are under the deepest indebted-

edness to Your Majesty for having pointed out to us the way in this vigorous and energetic manner. This proclamation of the 1st of May, 1889, fell directly in the midst of an already powerful agitation, which in the sphere of education had taken hold of all Germany. In great movements it can never be known precisely where the beginnings are to be found; but it may be confidently put forward as a general statement that the altered position of Prussia and of Germany among the nations of the world had widened our horizon, and had brought the question to all our lips, whether our education could go on in precisely the same line as before, when Germany was rather a self-centered people, leading a solitary, speculative life. Now that our eyes are opened, that our gaze is directed toward all nations, now that we have colonies in future, we have everywhere the impression that we shall perhaps in one way or another be obliged to break through the hedge that hitherto has surrounded our system of education. Still more clearly was the tendency to be recognized toward a more real mastery of the subjects of instruction, toward the improvement in the methods of the teachers, toward gaining time for the strengthening of the young.

This agitation became all the more powerful and intense in Prussia, since in Prussia on account of an excessive number of higher schools and an excessive production of men with an academic training all the learned professions were crowded; and therefore in the stress, in the struggle for existence, a multitude of doubts arose as to whether the schools themselves, the methods of instruction, were not to blame. Thus we in Prussia, in contrast to the South German states, have entered upon an agitation in which the question of privilege in the battle of competition assumes predominating importance. I am not in position even to sketch in an introductory address the chief directions which the principal movement has taken. It may, however, with confidence be said, that from the most radical conceptions to the most conservative, every possible new proposal has been presented. But the Prussian school system has—and this must certainly be brought forward in the introduction—an eminent political significance in this respect, that it has become a unifying bond within the German states. The other German states have modeled themselves after Prussia; they have made contracts with Prussia in regard to the qualifications of teachers and certificates of maturity. The imperial legislation has taken charge of the directions for doctors and lawyers, the Prussian legislation of the directions for theologians and teachers; in short, in all spheres a bond has been formed between Prussia and the other states of Germany. And if we here, to-day, are an entirely Prussian assemblage, still we must bear in mind that all Germany has its gaze fixed attentively upon us. It is true that we have among us, with permission of their governments, three gentlemen who do not belong to Prussia, but I have declared to the gentlemen, and repeat it here, that they are not here as representatives of their states, but as schoolmen who have accomplished something of importance in certain directions. And I thank the governments here in this place that they have placed the services of these distinguished gentlemen at our disposition.

That which is especially to distinguish these deliberations is complete freedom of discussion. It is the pressing desire of the educational department to receive from the gentlemen who are assembled here material and forms as sure and trustworthy foundations for the further resolutions which shall then be submitted to Your Majesty for your most gracious criticism. The order of business shall give complete freedom. It will be impossible to avoid disagreement; that will come, however, not from groups, but from single individuals, so that the source of the disagreement will always lie clearly before our eyes. It is possible that in some cases a second reading may be necessary, where an arrangement is not reached at the first. On this point I reserve further regulations.

In closing, I will say that I enter upon this conference with the firm hope of success. I am convinced that all the gentlemen assembled devote themselves with complete enthusiasm and consecration to the great tasks that form the substance of

this conference; and if in the course of this consideration our power should weary, then we will turn to Your Majesty, and remember with thankfulness and veneration the zeal, the love, and the consideration which Your Majesty has ever had for our entire school system.

The Emperor replied as follows:

GENTLEMEN: I greet you here most heartily, and I thank the honorable minister, that, in spite of an overburden of work of all kinds, he has undertaken to preside personally over this assembly.

I am firmly convinced that no man is better qualified and adapted to manage such a question skillfully and to contribute to its solution than our honorable minister of education, of whom I can say positively and without exaggeration, that in many years the German state and the Kingdom of Prussia has had no such able, devoted, and eminent minister of education as he. I hope that with your aid the work may be not only furthered but also brought to a conclusion.

After the chairman had declared the sitting formally opened, the Emperor again took the floor.

ADDRESS OF THE EMPEROR AT THE OPENING OF THE CONFERENCE.

GENTLEMEN: I desire to address a few words to you at the outset because it seemed to me important that you should know from the first what I think about this matter. Naturally there will be many things discussed that can not be decided, and I believe that many points will remain cloudy and obscure. I have considered it proper not to leave the gentlemen in doubt as to my own views.

In the first place I wish to observe that we have to do here above all not with a political school question, but entirely with technical and pedagogical measures which we must adopt in order to fit the growing generation for the demands of the present, for the position of our Fatherland and of our life in the world at large. Just at this place I wish to make one observation. I would have been very glad if we had designated these investigations, these proceedings, not with a French word "Schulenkunde," but with the German word, "Schulfrage." "Frage" is the old German word for trial examination, and I must say this is also more or less a trial examination. Let us then call the affair briefly "Schulfrage."

I have read through the fourteen points and find that they could easily mislead into a schematizing of the matter. I should regret that in the highest degree. The chief thing is to grasp the spirit and not merely the form of the affair. So I have on my part proposed some questions—I will have them circulated—and I hope that they also will find consideration.

First, school hygiene outside of gymnastics, a matter that must be considered very carefully; then diminution in the subjects of study (consideration of what must be cut out); further, the plans of instruction for the individual studies; then the system of teaching, the organization—the chief points have already been brought forward; sixth, is the chief ballast removed from the examinations? and, seventh, is overburdening avoided for the future? Eighth, What idea have we of the control when the work is finished? Regular and extraordinary inspections by different higher officials.

I lay the questions here upon the table of the house; whoever wishes to look at them can inform himself further about them.

The whole question, gentlemen, has developed gradually and entirely of itself. You stand here face to face with a matter which I am convinced that you, through the completeness that you will give it, through the form that you will stamp upon it, will hand over to the nation as a ripe fruit.

This cabinet order, which the honorable minister has had the goodness to mention before, would perhaps not have been necessary if the schools had stood in the po-

sition where they ought to have stood. I should like to observe in the outset that if I should be somewhat sharp I have reference to no one personally, but to the system, to the entire situation. If the schools had done that which we may demand of them, and I can speak to you as one who is initiated, for I have also attended the gymnasium and know what goes on there, then they would of necessity have taken upon themselves from the very outset the fight against social democracy. The teaching faculties would have taken firm hold of the matter unitedly, and would have so instructed the growing generation that those young people who are of about the same age as myself, that is to say, about thirty years of age, would voluntarily offer the material with which I could work in the state in order the more rapidly to become master of the movement. That has, however, not been the case. The last period in which our school was still a standard for our whole national life and of our development was in the years 1864, 1866 to 1870. Then the Prussian schools and the Prussian teaching faculties were the bearers of the idea of unity that was preached everywhere. Every graduate who came out of the school and began his volunteer military service or entered upon active life, all were united upon this one point: The German Empire shall be again established, and Alsace and Lorraine won back again. That ceased with the year 1870. The empire is united; we have that which we wished to gain, and there the matter rested. Starting from the new basis, the school ought now to animate the youth and make clear to them that the new political condition exists, that it may be preserved. Nothing of this kind has been observed, and in the short time that the empire has existed centrifugal tendencies have already developed themselves. I can surely judge that accurately, because I stand at the top and all such questions come to me. The reason is to be sought in the education of the young. Where is the lack there? The lack is surely in many places. The chief reason is that since the year 1870 the philologists as *beati possidentes* have sat in the gymnasia and have laid their chief emphasis upon the subject that was taught, upon learning and knowing, but not upon the formation of character and the needs of the life of to-day. You, Mr. Privy Councilor Hinzpeter, will pardon me—you are an enthusiastic philologist; but none the less in my opinion the matter has reached a height where finally it can go no farther. Less emphasis has been placed upon the *can* than upon the *ken*; that is shown in the requirements that are made in examinations. One proceeds from the axiom that above all things the scholar must know as much as possible; whether that is suitable for life or not is a secondary consideration. If one should converse with one of the gentlemen concerned and seek to explain to him that the young man must after all, to a certain extent, receive a practical preparation for life and its problems, the answer is ever, that is not the task of the schools; the chief object is the gymnastics of the intellect, and if these gymnastics were properly pursued the young man would be in a condition to accomplish with these gymnastics all that was necessary for life. I believe that we can be no longer deluded from this standpoint.

If I now return to the schools themselves, and especially to the gymnasium, I know very well that in many circles I am considered a fanatical opponent of the gymnasium, and that I have been represented in favor of other kinds of schools. Gentlemen, that is not the case. Whoever has been in the gymnasium himself and has caught a glimpse behind the scenes knows what is lacking there. Above all, the national basis is lacking. We must take the German as the foundation for the gymnasium; we ought to educate national young Germans and not young Greeks and Romans. We must depart entirely from the basis that has existed for centuries—from the old monastic education of the Middle Ages, where the standard was Latin with a little Greek added. That is no longer the standard; we must make German the basis. The German exercise must be the central point about which all turns. If, in the leaving examination, a candidate produces a faultless German composition one can decide from that of the amount of intellectual culture possessed by the young man, and judge whether he is good for anything or not. Now, of course many objec-

tions will be made and it will be said, the Latin exercise is also very important; the Latin exercise is very good for the purpose of polishing the scholars in a foreign language, and I do not know what all else. Yes, gentlemen, I have gone through all that myself. How, then, does such a Latin exercise originate? I have very often had this experience, that a young man has received, I will say, 4+, on the whole satisfactory in the German composition, and in the Latin composition 2. The fellow deserved punishment instead of praise, for it is perfectly clear that he had not completed the Latin composition in the proper manner. And of all the Latin compositions that we wrote there is not one in a dozen that was not produced with the aid of a pony. Such compositions were designated as good. That was the Latin exercise. But when we had to write a composition in the gymnasium on "Minna von Barnhelm" our work was hardly satisfactory. Therefore I say, away with the Latin composition; it hinders us and we lose our time for German over it.

In like manner I should like to see the national sentiment further advanced with us in questions of history, geography, and traditions. Pray let us begin at home. After, when we are perfectly acquainted with our own rooms and chambers, then can we go to the museum and look around there also. But first of all we must be perfectly at home in the history of the Fatherland. The great elector was only a misty specter in my school days; the Seven Years' War already lay outside of all consideration, and history closed with the end of the preceding century, with the French Revolution. The wars for freedom, which are the most important for the young citizen, were not gone through, and only through supplementary and very interesting lectures of Mr. Privy Councilor Hinzpeter was I in a position, thank Heaven, to learn these things. But that is precisely the *punctum saliens*. Why are our young people misled? Why do so many confused muddled reformers of the world appear? Why is our government continually growled about and foreign lands referred to? Because the young people do not know how our conditions have developed themselves, and that the roots lie in the time of the French Revolution; and therefore I am firmly convinced that if we explain to the young people in its chief traits this transition from the French Revolution to the nineteenth century, they will get quite a different understanding for the questions of to-day from that which they have hitherto had. They are then in a position to improve and increase their knowledge through the supplementary lectures which they will hear in the university.

If I come now to the occupation of our young people it is absolutely necessary that we reduce the number of hours. Mr. Privy Councilor Hinzpeter will remember that at the time I was in the gymnasium at Cassel the first cry of distress was heard from parents and families that it could go on so no longer. In consequence advances were made by the government; we were required to give to the director every morning a slip containing the number of hours of home study which we had found necessary in order to master the task set for the following day. I touch here especially merely upon the figures for Prima. Now, gentlemen, with entirely honorable returns—in my case Mr. Privy Councilor Hinzpeter could still regulate them—there appeared for each individual $5\frac{1}{2}$, $6\frac{1}{2}$, to 7 hours of home study. Those were the graduates. Add to that 6 hours of school, 2 hours for eating, and then you can figure up how much was left of the day. If I had not had opportunity to ride out and in, and to move about a little freely besides, I would not have known at all how the world looks. Those are tasks which can not be continually laid upon young people. According to my thinking also we must help and relax lower down. Gentlemen, it will not do; we can not bend the bow farther, can not leave it so tense. Here we must step down; here we have already overstepped the most extreme limits. The schools—I will now speak of the gymnasiums—have accomplished the superhuman, and have, according to my opinion, brought about an entirely too great overproduction of cultivated men, more than the nation can bear, and more than the cultivated people themselves can bear. So the word that we have, coming from Prince Bismarck, is right, the word "graduateproletariat". All the so-called "hungercandidates", espe-

cially the journalists, they are multifarious ruined gymnasiasts; they are a danger for us. This superfluity, that is already too great, like a saturated field that can take in no more, must be disposed of. On that account I will not sanction another gymnasium that can not prove absolutely its right to existence and its necessity. We have enough already.

But now we come to the question, how are we to get at the wishes with regard to classical culture, and with reference to practical culture, and with reference to the privilege of one-year voluntary military service? I claim that the matter can be settled quite easily, in clearing up the views that have obtained hitherto by one radical step, by saying, classical gymnasia with classical culture, a second class of schools with practical culture, but no real-gymnasia. The real-gymnasia are half and half institutions; through them a half and half culture is obtained and it gives only a half and half preparation for life afterwards.

Very just is the complaint of the directors of the gymnasia concerning the monstrous ballast of scholars that they have to drag along, who never get to graduation, and wish merely to obtain the privilege for one year voluntary military service. Very well; the matter can be easily helped by introducing an examination at the point where the volunteer wishes to leave, and outside of that to make his privilege depend, in case he attends a real-school, on producing the leaving certificate of the real-school. Then we shall soon see that the whole procession of these candidates for the one-year military service will go from the gymnasia to the real-schools; for when they have gone through the real-school they have what they want.

I join with this a second point which I have already touched upon; it is this: A reduction in the amount taught is possible only through a simplification of the examinations. Let us take grammatical topics entirely out of the leaving examinations and put them in one or two classes lower down, hold an examination there, a technical grammatical examination; then you can test the young people as sharply as you will; then you can join with this examination that for the volunteers, and connect with it besides for those who wish to become officers the examination for ensign, so that they will not need to take that again. As soon as we have modified the examinations in this direction, and have relieved the gymnasia in this manner, then will the force again appear that has been lost in the schools, and especially in the gymnasia, education, character-building. With the very best intentions we can not attain that now, where there are thirty boys in the class, and they have so great a task to master, and moreover the instruction is often given by young people whose own character must very often be perfected. Here I should like to introduce the watchword that I have heard from Privy Councillor Hinzpeter: He who will educate must be himself educated. That can not be absolutely affirmed of the entire corps of teachers. In order to make education possible the classes must be relieved with regard to the number of pupils. That will happen in the way I have just described. Then we must depart entirely from the idea that the teacher is only there to give lessons daily, and that when he has completed his task his function is ended. If the school draws the children away from the parental roof, as it actually does, then it must assume the education and responsibility for the same. If you will educate the young, we shall have another sort of graduates. Moreover, we must give up the principle that knowledge, and not life, alone is important; the young people must be prepared for the practical life of to-day.

I have written down some figures that are interesting statistically. There are in Prussia 308 gymnasia and progymnasia, with 80,979 scholars; 172 real-gymnasia and real-progymnasia, with 34,465 scholars; 60 higher real-schools without Latin and higher burgher schools, with 19,893 scholars. Of the scholars in the gymnasia 68 per cent obtained the privilege for one year voluntary service; of those in the real-gymnasia, 75 per cent, and in the schools without Latin, 38 per cent. In the gymnasia 31 per cent obtained certificates of maturity in the leaving examination; in the real-gymnasia, 12 per cent, and in the higher real-schools, 2 per cent. Each

scholar in the institutions named has about 25,000 hours of school and home study, and in this number not far from 657 hours for gymnastics. That is a preponderance of intellectual work that must certainly be reduced. For the 12, 13, or 14 years old pupil the average number of hours per week, including gymnastics and singing, is 32; in some institutions it reaches 35, and in Tertia of the real-gymnasia we may say and write 37. Now, gentlemen, we are all of us more or less mature and work as much as we can, but in the long run we could not stand such labor. The statistical returns concerning the spread of school diseases, especially nearsightedness, are truly alarming, and for many diseases general statistics are still lacking. Think a moment what recruits are coming up for the defense of the country. I am looking for soldiers; we wish to have a robust generation, who can serve the Fatherland also as intellectual leaders and as officials. This mass of nearsighted individuals is for the most part unserviceable, for how can a man who can not use his eyes accomplish much in after life? The number of the nearsighted in single cases rises in Prima as high as 74 per cent. I can say from my own personal experience that, although we had a very good room at Cassel, the room for the teachers' meeting, with good light coming from one side and good ventilation, which was introduced at my mother's wish, yet out of 21 scholars 18 wore spectacles, and there were 2 of them who could not see as far as the blackboard with their spectacles. These matters judge themselves. We must interfere at that point, and I consider it very urgent that the question of hygiene be taken up in the training schools for teachers, that the teachers receive a course in it, and that with it be joined the requirement that every teacher who is healthy must be able to go through with gymnastic exercises, and must do it every day.

These, gentlemen, are in general the matters I wished to bring before you, things that have touched my heart, and I can only give you this assurance. The innumerable petitions, requests, and wishes that I have received from parents, although we fathers were declared in the preceding year by my honored Mr. Hinzpeter to be a party that had nothing to say concerning the education of children, place me, as the common father of the country, under the obligation of declaring it can go no further so. Gentlemen, men are not to look at the world through spectacles, but with their own eyes, and are to find pleasure in that which they have before them, their native land and its institutions. To this end you are now to help.

Impressions produced by the address of the Emperor.—"This peaceful association of disputing gymnasiasts would probably not have occupied the general attention especially but for the energetic personal interference of the Emperor. The daily papers had for the most part greatly modified their expectations, when the first speech of the Emperor suddenly struck a quite unexpected tone. At least it seemed so. The first effect was one of amazement; a dull feeling of a tremendous blow against the whole previous management. All that could be heard at first was, 'It can go on in this manner no longer,' and 'The gymnasia have not done their duty,' and 'I know how matters go on there,' and 'Among the teachers there are many uneducated people.'"

The address was the sensation of the hour. Although clear and direct, it was not explicit in details and left room for misunderstanding and debate as to its true meaning. A general impression was that the speech bore heavily upon Von Gossler and that he would be compelled to retire, although such an interpretation seemed widely at variance with the high compliment paid him by the Emperor in his first remarks. Of the address in detail it was said—

(1) That the remarks on socialism were wide of the mark, since the educated classes were not socialists, and moreover the teachers had no time and were allowed by the regulations no opportunity to combat socialism. If any teachers were socialists it was those in the common schools, and they were driven into socialism by their wretched salaries and circumstances.

(2) The gymnasial teachers resented strongly the imputation that they were to blame for the increase of socialism.

(3) There was a general consensus of opinion among all classes in regard to (a) the increase of the number of hours for German, history, and geography; (b) the diminution in the total number of school hours, or at all events less home work; (c) the abolition of the daily Latin essay; (d) the overproduction of educated men, or, as the Germans say themselves, they have too many "Gebildete" in the country.

(4) The friends of the real-gymnasium felt that they had been struck a heavy blow.

(5) The newspapers resented strongly the words of the Emperor in regard to the "hunger candidates" and journalists. The *National Zeitung* said in this regard:

The German journalists belong so little to the "hunger candidates" that very many high officials in the service of the state are very glad to exchange their positions for a position on the press, if they can get it; we are often in the situation of being obliged to refuse such requests. And in regard to what it accomplishes the press can stand a comparison with all the other factors in our public life, although, like all these, it offers opportunity for criticism in regard to many details.

(6) The teachers as a class felt injured at the reflection presumed to be contained in the words "He who educates must be himself educated, and that can not now be affirmed of the teaching class as a whole." Other expressions of the Emperor, however, especially the cabinet order at the close of the proceeding, proved clearly that these words were not meant to convey any such reproach as it was assumed that they did, and it is more than probable that the Emperor referred to the faulty pedagogical preparation that the teachers received at the universities, for which the universities, and not the teachers, were certainly responsible.

This active participation of the Emperor in the proceedings of the conference was, in itself, generally regarded with favor. The impression produced was, on the whole, a good one. It can not be denied that his address was in the main clear and forcible. It was evidently, moreover, the straightforward expression of his own views, and not intended to dictate in advance the course of the debate, or to overawe the assembly in any manner. He came to the conference and expressed his own views plainly, and as the subsequent proceedings showed, the members of the conference did not hesitate to oppose those views. The address did no doubt once more arouse popular interest in the conference to a high pitch, and it probably infused a vigor and life into the deliberations that they might otherwise have lacked.

Debate on question 2.—At the conclusion of the Emperor's remarks the conference passed to the consideration of the second question proposed by the ministry, and Dr. Uhlig opened the debate. In treating of a common or union school as a common basis for all the higher schools, he referred especially to the experience of the Scandinavian countries where such a system had been in force for some time, and the figures he presented in this connection had much influence upon the conference. That such a union school would lessen the overcrowding of the learned professions was disproved by the fact that in Norway, where a like school had existed since 1869, the overcrowding was still a pressing evil and was said to be on the increase. Graduates in philology of ten years' standing still were seeking positions; young physicians went to America in troops; the number of students increased in the University of Christiania from 72 in 1878, to 377 in 1887. In Sweden, where a union school had existed since 1873, the condition of affairs was quite as bad. The number of physicians is as great again as thirty years ago, whereas the population has increased only one-fourth. Jurists who have passed all their examinations are glad to get a place on the police force. And in Denmark, which has had a similar organization since 1850, the number of students in the University of Copenhagen has increased five-fold. In regard to the suggestion that such a plan would be cheaper, Dr. Uhlig said that such a reason was neither pedagogic nor patriotic. It had once been said of German industrial products that they were "cheap, but bad." That would never be said of German schools. Dr. Uhlig quoted at some length from a letter of Prof. Wheeler, of Cornell University, after saying, "I do not fear, gentlemen, for humanistic culture; I believe that it will blossom in the twentieth century as it does in the nineteenth. If I had entertained any doubts on this subject they would have been dissipated by the insight that I have recently gained into the elevation of humanistic studies and humanistic instruction in North America."

At the conclusion of Dr. Uhlig's remarks the meeting was adjourned.

Second session.—*Continuation of the debate on question 2.*—The second session of the conference, on Friday, December 5, was devoted entirely to the consideration of the second question. This was one that brought out a great difference of opinion, notwithstanding the fact that it was a foregone conclusion that the decision would be in the main what it was. Dr. Schiller, co-referee with Dr. Uhlig, confined his attention to the second part of the question, and remarked that the real question at issue in changing the point at which instruction in Latin should begin was whether a part of the Latin learned should be forgotten four years earlier or later; and lessening the number of hours devoted to Latin would mean simply dropping out a mass of useless stuff that the teachers now found time for and consequently taught. Dr. Schlee, director of the real-gymnasium in Altona, a unique institution in which some of the features advocated by the reformers had been introduced, represented

the cause of a union school. He remarked that the school question had been treated hitherto as a gymnasial question, whereas he believed that it was a problem set by advancing culture and civilization. The definite problem was, how to provide a more complete and rounded education in the space of six years; and how to draw away from the gymnasia scholars who were following its course without having in view the purposes for which the gymnasium had been erected. The erection and fostering of higher burgher schools had not attained the latter object. They had increased 90 per cent, while higher schools as a whole had increased but $81\frac{1}{2}$ per cent. Therefore the burgher schools had not been recruited from scholars who would otherwise have attended some higher school. In regard to the Scandinavian countries, Dr. Schlee said that a comparison with foreign countries was always misleading, since the conditions were essentially different; Sweden had one foreign language more to teach than Germany, namely, German; the gymnasium there had but 32 weeks instead of 40, and had a total of but 1,536 hours for Latin as compared with 2,000 hours in the German gymnasia. Moreover, the director of the educational system in Sweden had said, in a recent letter, that though there were faults, and opposition existed, yet no one wished to go back, and the existing arrangement is firmly rooted.

Dr. Thiel, of the ministry of agriculture, etc., spoke especially of the gymnasial training in its relations to business life. Two-thirds of the gymnasial graduates entered business. In Prussia there were 171 cities where the gymnasium was the only high school. The whole programme of the gymnasium was cut out for a totally different purpose than that of preparing young people who had not completed the entire course to enter business life, and those who left from *Tertia* or *Secunda* had a very faulty preparation. That was a ground that had not been brought out the day previous, why the learned professions were overcrowded. The great number of scholars who attend the gymnasium because it offers an easy way of attaining a valuable privilege, that of one year's service, easily fall into the danger of being turned aside from the career of a merchant or business man because they have become too old and have not the proper preparation, do not know modern languages, drawing, etc. They therefore go on studying because they do not know what else to do. The gymnasium actually sent out two-thirds of its scholars without any preparation for practical life. In all branches of the government the opinion prevailed that the study of the dead languages was a very unfruitful one unless it was carried on to a certain point.

Dr. Virchow, the distinguished scientist, spoke as the oldest university teacher and as a physician. After referring to the former use of Latin for intercourse between different nations, and citing a modern instance of the same, he said: "A practical necessity of studying the ancient languages does not actually exist." The ancient literature

served more to show the sources of prejudice than the sources of knowledge. "I do not belong at all to those who rave against the ancient languages. On the contrary, I have endeavored for a long time to retain the ancient languages in our programmes; I have taken a stand again and again for Greek. But when year after year one has the experience that a constantly increasing number of graduates of the gymnasia appear at the university who do not have any ability to make any use of their knowledge of language that deserves to be mentioned, one must confess that that has been an idle task. Dr. Wehrenpfennig has undertaken to show how the different categories of scholars are equipped when they enter life. They are equipped, I would like to say, only with certificates; the real question is, how are they equipped in other respects. We must understand that it is the duty of the school to produce, not certificates, but capable men. Gentlemen, if the learned class is not to be the place to seek for persons who shall adapt themselves through their own exertions to new relations with greater ease than the average man, then we have all got to pack up. I am sorry that I can not testify that we have made progress for character-building in the scholars in the sphere of the examinations for the scholars. I am aware that it sounds somewhat severe when I affirm that the sound human understanding is a little crushed in the higher schools, in that the boys are led to take up so much that is doctrinaire, so many learned formulas, that they do not really see things as they are, but that they see something in them that is not there at all. The school as it has become is not a proper preparation for the study of the natural sciences and of medicine. We have indeed a great deal of opportunity to work with material that has not come from gymnasia. All of our American and Japanese scholars, a great part of the English, and a not inconsiderable portion of those from every conceivable nation have no proper gymnasial training. The greater number of these young men without classical training devote themselves to their work with much greater earnestness and much more consecration than the majority of our gymnasial graduates, especially in the earlier part of their courses. In our gymnasia a multitude of tasks are performed that have no visible effect."

Dr. Holzmüller declared that after having been, in 1885, a violent partisan of the union school, he had come to oppose it most decidedly. "One school can not be a 'maid of all work.'" He suggested that some combination might be permitted as a makeshift for small towns, with a distinct understanding that it was to be avoided in the larger cities.

Dr. Frick, the distinguished educator, director of the Francke Institutions in Halle, continued the discussion. "A common fault of all classes of the higher schools is that the instruction is too little considered as a continuation of the earlier work of the common schools, and too little treated with reference to an adequate basis for all the work that is to follow, and the instruction in foreign languages is introduced

too soon." He opposed the introduction of Latin in Sexta, and stated that in his own experience those who had taken up the study later had made the better progress. The senseless stuff usually offered to such young scholars in their reading and exercise books came in for sharp and sarcastic treatment. Dr. Frick proposed lengthening the course of study by a year, an addition which he said no more than corresponded to the additional requirements that were made upon the school. "Latin composition can fall, according to my conviction. For the sake of Cicero we occupy our scholars for years with the period of the Roman commune and its disreputable heroes like Catiline, Antony, etc., when the reading ought to bring about an ideal intercourse with the really great spirits of the Roman people."

Dr. Uhlhorn spoke earnestly in favor of reducing the amount of work required in the schools. The gymnasiasts were overfed, and therefore they had less hunger for knowledge than the Americans and English. "I greatly prefer the graduate who goes to the university with little knowledge but with a great hunger for knowledge to the one who has a great mass of information but little hunger, who knows it all already and does not need to learn anything. The school hours must, if possible, be reduced to 24. It has been said that much is taught that has no visible effect. Let me say openly that I greatly prefer that which has an invisible effect to that which has a visible effect. I believe that the chief thing, that is to say, the whole culture and structure of a man does not admit of measurement. Let us go once so far as to gauge the value of instruction according to its visible effect, and we will soon reach the point where we will measure the value of what is learned in the schools according as it does or does not lead to money-making, and then Germany will be lost; then all will be over with its dominant position among European nations. Above all, it matters not so much what is taught as how it is taught. 'Man lives not, nor shall live, by the bread alone that the school crumbles for him.' He lives also from that which other forces reach out to him; the force of the family, that of the church, and that of the entire life of the people. These forces also must share in the school; must take hold and coöperate with it. Then we will be able to bear individual imperfections without injury. Not knowledge, but culture is the chief thing."

Dr. Jaeger, in a spirited address, opposed a common substructure, declaring that by shoving forward the point at which Latin was begun the difficulty in deciding as to a boy's aptitudes would simply be postponed, since Latin was precisely the study that gave the best opportunities for judging. "The truth is, that in Latin a bit of 'Cultur-Geschichte' is hidden in every word, and that prevents the instruction from sinking into triviality; it makes it scientific, even for the boy of 9 years. The gymnasium must be preserved in its integrity, and the essence of the gymnasium does not consist in that the scholar reads any given Greek or Latin author in his fourteenth or, it may be, six-

teenth year, and also, not alone in that they are introduced to antiquity, but therein alone that by a gradual accustoming to exact knowledge, however it is grasped, the scholar is educated to knowledge in its highest sense." He affirmed that if the gymnasium succeeded in graduating one-fourth of those who entered with a thorough preparation for the higher positions in life, it has accomplished a glorious mission; they never would perfect an institution where all that was necessary was to shove in a boy in Sexta and pull him out an accomplished graduate at the other end. The three-fourths who did not graduate were perhaps not so badly off as had been represented. If they were a little at a loss at first in going into business they very soon made up what was necessary. In concluding, he cleverly showed that a good deal was laid upon the schools that properly belonged elsewhere. "The gentlemen who do not belong to our craft judge us too harshly. For, gentlemen, we are really in a sad case. Everything falls upon us. The sins of the nursery are laid at our door, and at the other end we are reproached for what perhaps may have been overlooked—I am terrified at my own boldness—even at the university itself."

Dr. Matthias, speaking briefly, with especial reference to lessening the amount of work, said: "We must once more reach that point when an educated man will not need to be ashamed that he does not know everything. We teachers are so often in the position of being regarded as two-legged encyclopedias. In society we hear, 'You must know that, surely.' But we ourselves and our pupils in the future, also, have the right not to know something; that is an inalienable right of man."

Several speakers referred to the proposal to begin the instruction in foreign languages with French instead of Latin, and opposed it on the following ground: French was written one way and pronounced another; it was not so complete in its forms as Latin, etc. Dr. Albrecht, speaking from an experience of eighteen years in Alsace and Lorraine, said that it was his observation that the scholars who began with Latin afterwards got along much better with French than those who started with French. On the other hand, strong ground was taken for beginning with French. Said Dr. Schulze, "That in itself Latin offers to the scholars of Sexta more difficulties than French, and that, therefore, it is more natural and more correct, according to the pedagogical principles, to begin with French is scarcely to be disputed. But against the pursuit of this subject, in the humanistic gymnasium, an agitation has come upon the scene that has been carried on by severe but not always by fair means. Consequently in the great mass of the public a deep dissatisfaction has been created against the gymnasium as a whole, and especially against the early beginning of Latin. If we wish to remove or alleviate this dissatisfaction, it is only possible by yielding the priority to French, for the demand is in itself just. To proceed in this way is also wise politically, in relation to our scholars. Our boys bring the opposition to Latin with them to Sexta." Referring to

the experience of Dr. Albrecht with the boys of Alsace, Dr. Schulze remarked, "They are like those unlucky boys who come to my notice in large numbers here in Berlin who have learned to babble a little French from their nurse. These scholars make the poorest progress in German, in Latin, and also in French. That is quite comprehensible. They think, indeed, that they know French already, and now they are to learn it again in another and harder way. That arouses their opposition."

Third session.—*Continuation of the debate on question 2.*—The debate on question 2 was continued in the third session of the conference, on Saturday, December 6. The referees summed up their arguments, reviewing the ground previously gone over, but a decision was postponed, as it was suggested that this question could better be voted upon after certain of the other questions had been discussed, inasmuch as the first four questions were closely connected. The conference then proceeded with the discussion of question 3, introduced by the referee, Mr. Hornemann, in a long address, evidently too long, since immediately upon its conclusion the chairman called the attention of the meeting to the provision in the order of business that the referees should express themselves as briefly as possible.

Debate on question 3.—Mr. Hornemann answered the question with a decided affirmative, although he was a partisan of the gymnasium: "I think it is indisputable that our age stands in a different relation to the Roman system than the preceding century. Science and life turn themselves more and more away from Latin. All the science in Germany speaks and writes German. Only sorrowful remains of Latin are found in the universities and gymnasiums. I wish to assert that continued translations of sentences without any connection whatever, as is the common custom at present, create, perhaps not necessarily, but in reality very easily, precisely the opposite of accurate thinking, namely, thoughtlessness. I consider it the more important duty of the instruction in Latin to introduce the student to the historical greatness of the Roman people. Precisely this duty has been repressed hitherto through grammatical formalism. I believe, nevertheless, although it is apparently a contradiction, that the amount of Latin reading can be limited. For the historical greatness of Rome is less in its arts and poetry than in its systems of government, justice, and warfare. Ovid gives in Tertia, along with Cæsar, nothing more than an attractive variety. Virgil, it must be confessed, awakens only a moderate interest in Secunda. Horace alone, according to my experience, remains a poet whose works have an enduring effect. So the chief part of the reading would be prose; and since among the prose writers Cicero would for many reasons fall into the background, * * * the kernel of the Latin reading would be the great historians, Cæsar in Tertia, Livy in Secunda, Tacitus in Prima. * * * English is of supreme importance. I need only point to the great influence of

English literature upon our own in the eighteenth century, to the in many respects typical significance of the social and political condition of England, and finally to the great influence that England has won over us by its position in the market of the world, which it is exercising in increased extent just at the present when we are entering into a large commerce and are beginning to take part in the colonial movement. All this forces us to designate English as already a power in a general education. English has become the world language; it is constantly increasing its influence. * * * It would be very desirable if English literature would crowd out the French in favor of our own. * * * Drawing demands time. Recently the Association of German Teachers of Drawing had the following demands for the preparation of teachers printed and circulated: The following are to be admitted to the study of geometrical and free-hand drawing: (a) Graduates of the high schools with nine classes; (b) Teachers who have passed the second examination for teachers in the common schools and the examination for teachers in middle schools. The study itself extends over three years, and it is to be pursued either in a technical high school or in the Academy of Art, or, finally, in an independent seminary for drawing teachers in Berlin, under the charge of a director trained both as an educator and as an artist. Opportunity is to be afforded the students to hear pedagogic lectures and, if possible, for observation of the instruction in the higher schools, and for giving instruction. The examination is to be special and practical. The first is to take place immediately upon the conclusion of the studies, the second at the end of two trial years. Teachers in middle schools are to be exempt from the latter." Dr. Kruse, co-referee, followed: "The magistrate of a small town in west Prussia invited me to visit his 'high school,' which did not seem to him quite safe. I went, listened to a few lessons, and finally asked the director, 'What is the special purpose in your instruction?' He answered, 'We prepare for the gymnasiums, progymnasiums, real-gymnasiums, real-progymnasiums, higher burgher schools, agricultural schools, and trade schools.' That, gentlemen, is the finest union school you can imagine. Nevertheless, at my suggestion, it was quickly transformed into a higher burgher school without Latin. As the sole ground for the early beginning of French the flexibility of the voice for learning the French pronunciation has been asserted. Gentlemen, it is a pedantic presumption for us Germans to wish to speak a foreign language like natives. If an Englishman or Frenchman speaks German with us, he can not and will not modulate his voice like the German, and his foreign pronunciation sounds altogether agreeable to us. But the German, who has given himself no trouble whatever to rid himself of the faults of his local dialect, wishes to speak French only after the fashion of Geneva or of Paris. Where shall we get the teachers? The educational ministry grants stipends, it is true, for study in foreign lands, but the young

men studied Provençal, old manuscripts, and speculate in order not to be behind the older philologists. Not seldom do these young men come home and say, 'We had to learn our French pronunciation all over again.' Therefore little weight is to be attached to the pronunciation and the flexibility of the voice. * * * I am of the opinion that we can cheerfully strike all the rules for gender out of the Latin grammars. This great and cumbersome apparatus serves a very inconsiderable purpose, and the rules—most of them amount to almost nothing."

Dr. Schottmüller, in a brief address, made some apt criticisms. "The school has accustomed itself for a long time to regard itself as an end in itself. It seems as though this idea was not to be abandoned. In opposition to this view we heard at the opening of the conference that the school had to adapt itself as a working member into the entire organism, that it must strive to satisfy completely the needs that are presented to it as necessary. * * * It goes very much to our heart, too, to cut off the bough on which we are perched; idealism has worked itself so thoroughly into our flesh and blood that we feel it bitterly, perhaps, not to be able to transmit to our children and grandchildren what we have had. But such a superabundance of demands have been made that it can go on so no longer. * * * If, now, the school does not really have the duty of furnishing all the knowledge that may be useful in life, then it does not matter so much *what* is learned as *how* it is learned. From this standpoint we can do away with a great deal. The number of hours of study and recitation that are passed sitting must be reduced. * * * One of the greatest misconceptions in the arrangement of our school programmes is the provision for optional studies. The overcrowding of the scholars comes for the most part from this. If an individual, according to his own option, may take singing, drawing, gymnastics, English, and Hebrew, then it need cause no wonder that the scholars have eight hours of work, without reckoning home exercises. If English is introduced, let it be obligatory, or not at all." * * *

Dr. Von Helmholtz, the distinguished scientist, said that this question gave him an opportunity to say what he desired to lay before the conference, and made a notable address. It deserves the extensive quotations that follow: "I must at the outset indicate my standpoint. I consider it very essential that the best possible schools shall be provided for the better gifted part of the nation, and that these shall be protected as far as possible from the pressure of scholars who might better go into other schools, and I hope that the views that have been expressed by His Majesty on this point will essentially lighten and assist our task in this direction very soon. As the best means for giving the best mental training, we can regard the ancient languages alone as authenticated. But I must say that the objects that I myself would have in view, and that seem to me the most important, are joined almost altogether with Greek, and Latin seems to me to deserve only

a secondary consideration. It has indeed won a great historical significance for many of our learned professions. It is, perhaps, also the best means of leading to an understanding of Greek. It has a firm and complete form, similar to the French language, and the study of Latin is undoubtedly useful for cultivating the language sense. But for real intellectual training as I conceive it, that is, for cultivating a refined taste not only for language but also for moral and aesthetic matters, it deserves relatively little consideration. The Latin authors that we still have and are able to read, are, with exception of certain specialists, who describe military affairs, or have written original works on history, and the lawyers and jurists, after all authors of the second rank. Of poets, the original works of Plautus can not well be read. Terence, Horace, Ovid, are attractive authors, * * * but the time for reading Latin must for the most part be spent on authors who can only be designated as imitators; from them I do not expect much in the way of formation of taste and not much influence on the sense for language. * * * I see no ground for declaring against admitting graduates of the real gymnasium to the study of medicine. But I must always declare that the value of the true flower of classical culture seems to me so high that I would prefer to retain the classical studies so far as possible, even at some sacrifices. In the physical laboratory I have had students who must be regarded as select; they are not compelled to this work. Now it has often happened that those who came from the gymnasium were not quite so completely prepared in the first and second semester (term) in mathematics and physics as those who came from the real gymnasium. The latter had previously occupied themselves more with physics, and it was easier for them at the start. But those who came from the humanistic gymnasium, if they continued their studies for a year, have always gotten so far that they could work independently, and find their own way independently. The real school scholars have for the most part fallen noticeably behind. I do not wish to lay that to any lack in the instruction of the real schools, for I do not fail to recognize that according to the conditions that have existed hitherto those scholars who had the means and the necessary talent were thrust into the gymnasium and the gymnasium was always preferred to the real gymnasium, because after completing the course in the latter certain limitations were encountered in the choice of a profession. Under these circumstances it is natural that those scholars who are able to attend the gymnasium and those of somewhat less capacity go to the real gymnasium. For exceptionally gifted scholars it makes no difference what school they attend—they help themselves. * * * The most important results that we have always expected from the classical instruction is that the young people learn thereby to write their native tongue correctly and well. I had, as I have already said, select students in my laboratory, and it has always been a sort of punishment for me when, at the end of the semester, the written theses

on what they have discovered in their scientific investigations come in. I have often had to give these productions back twice, thrice, four times, and lived for a time almost like a teacher in a gymnasium who has German compositions to correct. They were so little accustomed to arrange together what they had discovered, and to express it sharply and unequivocally they had so much coarseness and carelessness in their German expression that I was always astounded. I must, alas, confess that not alone students in the institute were such sinners, but that a whole procession of scientific specialists have the same failing. There are distinguished investigators who have produced works of the highest importance, but who write so badly that it is necessary to read each period two or three times in order to get the meaning, and finally it is impossible to make any sense out of it. * * * According to my not extensive experience, I cannot admit that overcrowding exists in our present gymnasium for scholars with good talents and gifts; the trouble is there are too many scholars in the gymnasium who do not belong there. * * * I consider it morally injurious when themes are set for the young people to write upon, concerning which it is impossible that they should know anything honestly. They are compelled to hunt up phrases which make it appear as though they had something to say, while they conceal their ignorance. It is essentially the business of a 'leader' writer. The leader writers have generally had a mournful influence on our style. They prefer abstract words that sound significant, but admit of no definite conception. According to my views the Latin composition is the most notable of all leading articles. I consider it essential that somewhat more time and strength should be devoted to a real understanding of mathematics, and I think this will be best accomplished by the written treatment of mathematical problems, and a careful supervision of the German expressions used in the same. I know from my own experience that I never feel safe when I have worked out a new problem until I have put it on paper. One only reaches a real control as to the correctness of mathematical reasoning when one has it on paper."

Fourth session.—Continuation of the debate on question 3.—The fourth session was held on Tuesday, December 9. The debate on question 3 was continued, Dr. Schrader, curator of the University of Halle, being the first speaker: "The youthful powers are taxed too greatly under the present system. * * * I may be permitted to refer to an American, an ardent admirer of our school system, Mr. A. [D. ?] White, who, with all the recognition that he grants our schools, yet says that he seems to miss something of the unemployed strength in our youth that he is accustomed to see in Americans and Englishmen. * * * The scholar is not to say what others think and believe; he is to say what he himself thinks, what he has gained; he shall be genuine in his judgments and in his tasks. * * * What we must give the youth in order to protect them against sinking into mere work-a-day

routine, against untrammelled lust for gain, against despondency and a dejected blunting of all the finer faculties, and to sharpen their consciences and their moral sense, is idealism, the consciousness of their own moral responsibility. That can not be gained by dissipation of energy on several different subjects, but by a willing absorption in the subjects of chief importance. No teacher has ever succeeded in inspiring a youth for ten kinds of knowledge, no matter how attractive each kind might be, and by reason of the symmetrical constitution of the youthful mind that will always be impossible."

The debate on this question drew out more speakers than any other, and it will be impossible to do more than quote some of the most striking and pertinent remarks. Said Dr. Kropatschek: "We must give up teaching in the schools everything that an educated man may possibly need in his later life. That is simply impossible. The school is not to teach the elements of all culture, but the scholars are to acquire the capacity of learning, for themselves, all these things. The school is to teach how to learn." Maj. Frick, speaking for the war ministry: "The leader himself can not carry out his plans, but he must know how to give his orders to those whom he is to lead in a precise, comprehensive, and plainly unmistakable fashion, for the least lack of clearness may be the cause of sacrificing hundreds, even thousands of men unnecessarily. That demands extraordinary mental training; above all things the officer must have a perfect command of his native tongue. One of the speakers leaves the impression that we soldiers make special and unusual demands on the school. That is not the case. We also wish that the young man who enters our ranks shall be equipped with a harmonious development of mind, heart, and character; we wish also that he shall understand the position of his country among modern civilized nations; that he comprehend his times and their duties, but does not forget where the roots of our culture are. We are, in short, in peace sculptors, educators, teachers, in war leaders." Dr. Paulsen made a sharp distinction between subjects of first and those of secondary importance. "I am also of the opinion that we introduce scholars to the peculiarities of both languages better through translation into German than by the reverse process. * * * A true sense for language, such as protects the scholar from confusion will never more be attained in the school through expression in Latin. * * * The gymnasium can attain freedom only when it can say with a clear conscience, 'I force no one to come in, I leave the other way open to everyone.'"

Dr. Frommel, the court preacher, spoke in severe terms of the schools and also to some extent of the teachers, and, as might have been expected, stirred up much feeling in the conference, so much that Dr. Stauder, on behalf of the ministry of education, challenged him to produce the proofs of what he had said, and if he had none, to beware of generalizing on an insufficient basis of fact. Said Dr. From-

mel: "I have known most excellent men as teachers, men with the highest ideals, but I have also known men broken down, their idealism gone, sunken in the misery of existence, destroying themselves in useless strife; men with mere formal culture, dead knowledge, embittered men. * * * But if our civil arrangements are such that they force a whole swarm of men into the gymnasium who do not belong there, and the departments of the administration demand a leaving examination from the people who always remain in the grades of the subaltern service—gentlemen, that makes social democrats. * * * Let us not deceive ourselves; bitterness instead of piety prevails among the youth of our gymnasiums; little enjoyment, much vexation; much criticism and little thorough knowledge and persevering industry. They are overdriven like a herd that can advance no longer, and overirritated. The humanistic gymnasium, as it is to-day, guarantees no humanity as fruit. Humanity, as Schleiermacher says, is harmony of mind and soul. * * * Give us good teachers, and then give them the necessary freedom, and the programmes and all the rest will soon be found. Where there is a teacher behind the instruction full of love and enthusiasm, the boy is kindled with or without a programme." Dr. Zeller claimed that "the demands on the language instruction in the way of formal training were fully satisfied by the instruction in Greek and Latin, and I would recommend with the modern languages those methods that correspond to the practical aim of this instruction in reading, writing, and a knowledge of their literature—one learns to speak well only after a long sojourn in a foreign land or when other opportunity is presented for much practice, and then when good school instruction has preceded, the progress in speaking is tolerably rapid. * * * What the scholars do voluntarily is no such burden for them as that which they are compelled to undertake. The young scholars must be given time for their individual fancy. It is easier for them to spend six hours on favorite scientific studies and they are less oppressive than three obligatory lessons. * * * When a young man learns in the schools obedience and conscientious labor, when he has the ambition to do well all that he does, when the school has wakened and fixed in him the feeling of personal responsibility, then it has done all that it can do."

Sixth session—Debate on question 7.—It would be interesting to go into the debates on all the questions laid before the conference, especially as the remarks were not always confined closely to the topic before the house, and some of the speakers who did not attend all the sessions took occasion to present their views on the whole subject under some particular topic. But for the purposes of this paper it will be necessary to limit the consideration to those topics that are of the most general interest and that apply as well to the United States as to Prussia. We will omit, therefore, the debates on questions 4, 5, and 6 to note some of the chief features in the debate on question 7, at the end of the

sixth session, held on Thursday, December 11. The question was not one that excited a warm discussion; on the contrary, there was substantial unanimity of opinion. Nevertheless, some of the views and facts presented are of interest.

Dr. Jaeger, in opening the discussion, said: "We speak to-day of an individual treatment of the scholars, in so far as that may be possible, but we often forget that while an individual treatment, and consequently a moderate number of scholars, is desirable there is also a minimum limit beyond which a common education—an education of the scholars by themselves by contact with each other—is no longer possible. A certain number is necessary to make up a class, if the class is to be a well-arranged organism, in which there are educating and formative forces that do not depend immediately upon the teacher or director; * * * for it is not true that the teacher shapes the individual, as is often asserted, but the individual shapes himself from the instruction of the teacher and the entire life of the school. Now that we are speaking of teachers, and not altogether with superfluous compliments, I should like to call attention to the fact that no class is subjected in so pitiless a manner to public criticism as ours, and quite naturally so. Our first critics are the scholars, and moreover scholars from 8 to 18 years old, who, as is well known, always think extravagantly. These lay the foundation for public criticism. The echo of the judgment that they give shapes the parents', who are especially sensitive on this point, and that also quite naturally, because the matter concerns their children. What the teacher does—I might almost say what he thinks—lies open to all the world. In one respect this is wrong, but in another it is good, for it compels—or let us rather say induces—the teacher to do nothing but what every man may see." Dr. Kropatschek emphasized the necessity of the director knowing each scholar, and, therefore, the importance of keeping the institution as small as possible. He urged—and that sounds somewhat curious to American ears—that every director, or at least those in the larger schools, should be provided with a secretary. "It is often a little hard for the director to get through with all the writing that he has to do, and even if no official secretary were allowed him, still he might be given some help in this direction." Dr. Schiller said in regard to individual work: "The impression can easily be produced that when we have a maximum attendance of forty in a class the effect will be that we can individualize in our instruction. But unfortunately that is one of the big words in which pedagogy is rich. As a matter of fact it is impossible then to individualize in the pedagogic sense. * * * What belongs to individualization? First of all, that the individual scholar connect himself with the teacher as with a father. What that means when forty scholars are to join themselves to one teacher, and he is to reciprocate, you can well imagine."

Dr. Kruse had some earnest thought for the teachers. "As for the burdening of teachers with too many lessons, that is for the most part quite tolerable now, for the reason that we have a whole outfit of voluntary teachers. All that will change, for the teaching profession, numerically considered, will deteriorate noticeably in the next five years. In one year, among two hundred graduates there were only three who wished to become teachers. The scholars in Prima have it daily before their eyes that the volunteer teachers must labor for years without compensation. * * * As for the general position of the teachers as a class, the school councilors have here been specially called upon to express themselves; and therefore I will not withhold the acknowledgment that if this assembly disperses without having done something tangible toward raising the feelings and the circumstances of the teachers I will consider it a great misfortune. I have never in my life belonged to an association or an organization that pursued personal or class interests; but to-day I hold it to be my duty to recognize here that we are on the point of forcing the most enthusiastic and the best teachers, directors, and school councilors to throw down their arms. You can no longer control the humor of the teachers. If now, at last, no help is afforded, the unions of restless elements that are spread through the entire monarchy will gain the upper hand; the others will retire and say: with the school it can no longer go on thus."

Seventh session.—Debate on questions 8 and 9.—The seventh session was held on Friday, December 12. It was decided to discuss questions 8 and 9 together. These, like question 7, were not controversial questions; they were recognized as being of great importance, and the feeling of the assembly was for the most part harmonious. Dr. Schiller introduced the discussion of question 8 in a long and interesting speech. Some quotations can not be omitted. "I consider pedagogy as preponderatingly a science of experience. But in the last few years the experiences in pedagogy have perhaps not been made with sufficient broadness, the chief cause of which is the lack of free movement brought about by the leveling of the schools, that has allowed little chance for original development. If we had more private institutions, such as formerly deserved the highest praise for their development of methods, we would have been much farther advanced. * * * In the first place, I ask, what does the question mean by intensive methodic instruction, and answer thus: The simplifying of the process of learning on the basis of psychological knowledge, with a stronger emphasis of the forces of educative value. Expressed concretely:

"(1) The matter is to be limited to the elements of knowledge, and so to be simplified.

"(2) Since facts have greater worth for the forming of the mind in proportion as they are derived as conclusions from knowledge already possessed, or by observation, or by a combination of these processes, the acquisition of facts must be transferred essentially to the instruction,

must come from the intellectual force of the scholars, and the result attained must be regarded as a starting point for the next goal.

“(3) The individual subjects are to be brought into an organic relation, in order to make the instruction thereby as harmonious as possible.

“I ask myself, can instruction in the ancient and modern languages pursue the same aims? And I answer, No. The living languages must be imitated, spoken, and, as writing is a substitute for speaking, also written from life. For the dead languages, these aims are lacking. The culture value that lies in linguistic forms as means for expressing thought and in the authors who offer the youth a world of complete thoughts, feelings, and deeds that he can think over and feel over again, that refine and strengthen his will, fill his fancy, and furnish his memory with valuable contents, is common to all languages. If to-day the instruction in the classics does not meet these requirements, it seems to me the cause is to be found in the following facts:

“(1) In the existence of special vocabularies.

“(2) In the existence of printed exercise books for translation into foreign languages.

“(3) In the extension of the grammatical instruction.

“(4) In the kind of reading.

“Etymological exercises, grammar, written exercises, all these can be united only with the subject that comes up in the reading. We must see to this the more as the time for this instruction becomes less. The most of the words acquired in the vocabularies, in the exercises, and in the grammar are entirely lost. I have taken pains to look through one of the best exercise books with a view to seeing what part of the matter in the vocabularies is of use later, and I have found that about half the words that are here learned never in his life come before the scholar again. Is that not a waste of strength and time? If we must to-day limit ourselves, then we must have reading books that are adapted for the later readings, whose extracts are taken from the authors that are read later. Special vocabularies are to be avoided, since they are a remnant of the Middle Ages, when Latin was studied as a living tongue; for collections of words and phrases are in place only when a living language is to be learned quickly for the purposes of daily use, without the circuitous method of reading. * * * We have often undertaken to make parallel grammars, and there are excellent beginnings in existence. * * * But there is always too much learning in them for me. We have helped ourselves better by making our own Greek grammar, six and one-half pages, with examples and short explanations. With it we are able to read extensively. Moreover, this path leads to the goal, and the past shows us the way. Similar arrangements were known fifty years ago. * * * The necessity of simplifying and unifying the instruction would be best met by an internal coördination of the subjects of study. I can not present there the entire organization of the instruction, but by a concrete exam-

ple I can illustrate to you how effective instruction can be made through such an organization. I take, for example, the class *Quinta*. We have there three hours for geography, and German alone is considered. The whole material for the instruction in German, both the prose specimens and the poems, twenty-one of which are partly learned, and partly treated only in the class, relates to the home. The entire instruction has the tendency to introduce the scholars into the knowledge of home, to the history and geography of their German home, into the knowledge of both land and people. It forms the central point for the instruction in history, which is very closely interwoven with the instruction in German, and even geography, natural history, drawing, and singing all unite around this central point. The focus of the entire instruction is formed by eight historical pictures, such as *Armin*, the migration of the nations, *Bonifacius* and the introduction of Christianity, *Frederick Barbarossa*, etc. The last picture presents the founding of the new German Empire. All the instruction refers to this one central idea. Geography presents the stage on which all these actions took place, natural history presents the natural conditions under which they developed, the instruction in drawing illustrates to the eye, by presenting models of the old Saxon and Frankish peasant houses, a simple church, the various weapons, the external relations of our ancestors, the instruction in singing enlivens the picture with sacred and popular songs. This same tendency is carried out through the entire instruction, and at the end of the year we can reckon with confidence that our scholars possess an elementary knowledge of the chief points in the German heroic sagas of their native land and its present and former inhabitants, of the life, customs, intercourse, war customs of their forefathers and their contemporaries, of the chief political regulations of their native land, and of the religious and moral ideas of earlier and later times. The instruction in Latin is joined organically to the rest in that it presents the chief features of ancient history, and contrasts the princes of antiquity, as *Alexander the Great*, *Julius Cæsar*, etc., with these German princes, and so illumines and to a certain extent deepens the knowledge of the German rulers, the German land, and the history of its institutions, from foreign history. We have set a center for each class in a similar manner." Speaking of seminaries for teachers, *Dr. Schiller* gave this conception of the necessity for such an institution. "An equipment must be furnished that corresponds to the whole system of education and instruction, every institution must have a collection of the best illustrative material and the best writings, every seminary must be a sort of educational museum, in which not alone the teachers of the institution find what they need, but to which all the teachers of the province may come and make themselves acquainted with the best helps that are in existence in the field of pedagogy."

Dr. Graf, after making some statements that threw doubt on the existence of overloading in the schools, quoted, with approval, the words

of Axel Kay, "The demands of hygiene must be respected, whether there is over-exertion in the school or not, whether it can be proved that the school has hitherto had an injurious effect on the health of the scholars or not." Dr. Graf further spoke earnestly in favor of school physicians. Dr. Werner, speaking at some length for the war ministry, said that the army could not use men who were near-sighted, and that it was certain that the schools were making them so, and in proof of the latter many figures were presented.

The debate on question 9, relating to gymnastics, etc., was opened by Dr. Eitner, in a comprehensive address that is worthy of translation. After sketching the existing provisions for physical culture in the Prussian higher schools, substantially as given elsewhere in this paper, he proceeded to ask wherein lay the necessity for reform. "The exercises are selected to suit the age and the powers of the boys, and fulfill completely the purpose for which they were intended; but, and here we reach the heart of the whole question, the time allowed for these exercises in the programme is not enough. * * * If the school has the duty of developing all the powers and capacities of the pupil, both of his mind and his body, then there must exist above all a certain balance between the intellectual and physical development. * * * If the instruction in gymnastics is really to have a salutary effect, then the instructors in gymnastics must take an active part in the whole work of education and instruction, for they also must be educators whose object is to advance the development of the physical nature in closest connection with the intellectual and moral aims. Pestalozzi would not have mere gymnasts as teachers of gymnastics, but "teachers who have an insight into the development and connection of the human organism as a psychological unfold of human nature." * * * Gentlemen, it seems to me as though once more a lively interest in the youthful sports that have almost entirely disappeared for centuries may now be perceived in all parts of Germany. In play especially a wonderful balance is disclosed between intellectual and physical labor, since skill, adroitness, rapidity, and sureness of movement, a practiced eye, a strong and lasting foot, are of equal value with shrewd calculation, cunning device, and far-reaching plans. * * * Aside from this it affords the best means for recuperation from severe intellectual labor. More than this, the playground is the place for character forming for the growing generation such as nowhere else exists. What no amount of admonition and preaching can accomplish is accomplished by intercourse with comrades in play; here the obstinate lad must control himself else he will be excluded; here the insolent learns to be discreet, the quarrelsome to be patient, the defiant to be yielding; here all learn obedience and subjection, under the laws and rules of the game; all the comrades of one party learn something of the lofty consciousness of fighting with and for one another, of taking up arms for a common cause. Thus play becomes a school of life; it teaches all the traits and virtues that unite

men together in the family, the community, and the state. * * * Finally the sports offer the educator the best of all opportunities of learning the characters of his scholars in a true mirror. The peculiarity of a scholar does not disclose itself everywhere pure and unconcealed. Before the authority of the teacher, before the commanding earnestness of duty, his nature often shows quite different from what it really is; but in play there is no concealment and no misrepresentation.

* * * And how instructive it is for the well-wishing educator to observe how this or that scholar whom he had found inattentive and without interest in the class, stupid and without gifts, here on the playground shows himself lively and interested, shrewd and inventive. Must not the teacher after such an insight into the nature of the pupil conclude that he himself was mistaken, that the instrument had no harmony for him merely because he did not know how to play on it.

* * * Weighty considerations can not gain ground against the games introduced to us from England, lawn tennis, cricket, and football, so long as these are practiced and fostered merely as inspiring, varied, and highly interesting games, and are not treated as sports, and therefore as leading to a one-sided development of specialists or professional players. * * * Finally, the question as to whether the youth shall be left to themselves in playing, after what has been said in regard to the obligatory introduction of games, answers itself. With all the freedom and lack of restraint that one gladly grants the boys in their play, everyone must still allow that a well-regulated game can not dispense with the authority of a director and adviser. This side also of young life demands a careful and intelligent oversight in order that the natural impulse to play may not go into wrong paths and lead to excesses and roughness. That the young scholars do not regard such an oversight as an irksome constraint is shown by the fact that they honor and love those teachers the most who share their pleasures, who play with them."

Dr. Gussfeldt said that though it might sound like educational blasphemy, it was his conviction that in all doubtful cases health and physical culture should take precedence of its intellectual sister. Count Douglas wished the schools to introduce a course in "early aid for the injured," in which the scholars could occupy some of their spare time as well as in games. "You will all agree with me that if a hundred young men are properly trained in this way, and it happens that only one of them has an opportunity to save a human life by means of what he has learned, yet the trouble that it has cost to train the whole hundred is abundantly repaid." Dr. Kropatschek had a word to say for the teachers. "If we desire that the teacher shall participate gladly and freely in the gymnastic instruction, then we must also demand that the teacher get something for it. Every laborer is worthy of his hire. If we require the teacher to give gymnastic instruction and play with the children, we ought not to forget that he has to care for others also,

that he is a father, the head of a family, and has children which he has not only to bring up, but for whom he must unfortunately too often labor outside of school hours, for generally his salary is not sufficient so that he can live free from care when he has any regard for the future of his children." In conclusion Dr. Kropatschek made a sharp attack on Froebel, charging him and his system with propagating revolutionary ideas. This charge called forth a vigorous defense on the part of several of the succeeding speakers.

Dr. Bertram, in opposition to the views of the other speakers, took ground in favor of the *Fach-Lehrer system*, or system of special teachers. He claimed that a specialist could teach better because he would be more thoroughly acquainted with his subject; that he would on the whole have as good if not better opportunities for judging the scholars, since, though he had each class only a few hours a week, yet as a rule he had the same class year after year; and, further, that the more advanced the classes the more difficult it was to get a form master that could handle all the subjects properly, and finally in the upper classes it became almost impossible. Many spoke in opposition to the supervision of games advocated by the first speaker, but it was evident that their conception was different from his; he favored that free participation, without any suspicion of authority that is now in practice, especially in many of the private schools in the United States. Deputy von Schenkendorff had some facts to present. "In coöperation with a number of gentlemen distributed throughout the whole of Germany I addressed this year to five hundred cities the question: What is done in your place, outside of the instruction in gymnastics in the schools two hours per week, for the physical development of the youth? I received an answer from about three hundred and fifty communities. The result that only in extraordinarily few places is anything done outside of gymnastics; there is an extraordinary lack of playgrounds, and third, it was frequently said we have had playgrounds and plays have been introduced, but all has been again given up."

Debate on questions 11 and 12.—These questions referring to the preparation of future teachers and the coöperation of the school with the family, were discussed in the session of Monday, December 15, a session memorable for the intense feeling manifested for the condition and standing of teachers. The members of the conference who were not teachers were not slow to express their ideas as to what the teachers ought to be and to do, and the teachers for the most part took all these admonitions most kindly, but at last they asserted their rights, and repudiated their responsibility for all the sins of society. The debate on question 11 was opened by Dr. Klix, who at the outset referred to the two kinds of teachers, specialists and form masters, and declared that any consideration of the proper preparation would have to be based on this distinction. The subject was limited by the questions to the "wissenschaftliche" preparation which may be translated by "knowledge equip-

ment." Intense specialization can not afford a proper preparation for the class teacher. He is so situated that his education can embrace a thorough understanding of the elements of several branches, and in addition the demands of a general education may retain their claim on him. It may be demanded of the future teacher that he become somewhat acquainted in the fields of philosophy, pedagogy, religion, and history, and that he acquire those attainments in the different subjects of instruction that will enable him to grasp the significance of each subject in its field, and thus to work in a manner that shall further the concentration of instruction. As for the specialists, they should be educated in the universities; it would be folly to start seminaries for the training of teachers for the higher schools. But certain steps might be taken to make the university training more profitable. The candidates who have occupied themselves exclusively in the university with the diplomacy of the Middle Ages and the reading of original documents of that period, and have studied only the memoirs of the eighteenth century, and who now on the ground of such studies with an inconsiderable survey of the wider field of history, have acquired some sort of a certificate to teach—I can not bring myself to regard such candidates as capable teachers of history. * * * It is not at all seldom that we see that the students have arranged their studies in a most unskillful, and completely unmethodical manner, and the results appear in the examination; this want of purpose we find also with students who are energetic and earnest. I wish this assembly would declare that it is an imperative necessity that students should be advised and directed as to the proper way of arranging their studies. If such a guide were put into their hands that they should see what subjects and in what order it would be best for them to pursue, they would attain far better results. * * * The student in the university ought not be troubled at all with practical preparation for teaching." The further discussion of this question brought out little difference of opinion, and not many statements of great interest. Dr. Schrader opened the debate on question 12 in an interesting address, that was followed by a splendid speech from Dr. Hinzpeter. Both are worthy of translation and we can not refrain from extensive quotations. Said Dr. Schrader: "The school influences the moral development of its pupils through the personal bearing of the teacher, which should always be characterized, not by pedantic severity, which always borders on unreality, but by purity and dignity, combined with all inward cheerfulness. In a lofty consciousness of his duty, with pride in his calling he must keep himself far removed from every equivocal expression, from every act of passion, from every struggle for external luxury. He must keep clear of every outside agitation, whether ecclesiastical, political, or social, and that also out of consideration for his own freedom; otherwise he loses his inward poise, and shakes the confidence of the parents. * * * I wish to demand further that there arise no foolish strife as to rights and limitations between the school and the home."

Said Dr. Hinzpeter: "Home and family fulfill, alas, in the hurry and burden of the struggle for existence their natural duties ever less, ever more seldom. But I think it is impossible for the school to repudiate its duty here to step in and aid. It takes control of the scholars to a very considerable extent; it really governs their entire existence in and out of school. * * * That the school can educate only indirectly, through the instruction imparted, is unquestionable; but I think the school can do more in the way of educating through the instruction; the teachers ought not to content themselves with going over and impressing their lessons; they must go further and make them of use in the formation of the scholar's character. They must know how to look out and make available the educating power that lies in every subject. If this second activity was exercised as skillfully and zealously as the instructing, then the influence of the schools would also be more intense and would find more recognition, and the cry for reform of the schools and school plans would be by no means so loud. For deep down every human being who is halfway gifted with a sense for education knows that it really matters very little after all what the scholar learns, but how he learns it and adapts it for his own nourishment. * * * I should like to say with conviction that every school reform, even the most thorough, must remain ineffectual without a school-teachers' reform. Now I am certainly the last one who would wish to speak evil of the teachers. I am very proud that I am the son of a schoolmaster. For, gentlemen, I believe that the schoolmasters are the true salt of the earth. But that can not prevent me from lamenting that so many teachers, are, to use a well-known figure, mechanics when they ought to be artists, artists in the highest sense of the word, who are called to create the most noble monuments out of the most costly material. But that this may be possible, a number of things are necessary that are at this moment too often missing. Above all would it be necessary that the teachers should feel that they were a special class with the high calling of training the young, for whom studies and learning were but tools for the higher work of education—a class which, like other classes, groups itself around a center of teachers' families, with their own class honor and class self-consciousness, in which, as in the families of officers, the proper talents and the proper virtues of the class are inherited. And further, every member of this class would regard it as his highest happiness and his greatest honor, not so much to increase his knowledge a little here and there, but to accomplish his higher purpose, his aim as an educator in its truest sense, to discover those elements in his subjects that were morally elevating, and to use them for the welfare of his scholars. It is true that to a certain extent directness may be given for such efforts and objects, for such an artistic treatment; * * * but the teacher, with his talents, his beliefs, even his habits, remains of much greater importance. It is well known that in no other calling does the personality have so direct an effect as

in the calling of the teacher. Therefore, in theory the best of the nation are just good enough to be the trainers of the young. But, gentlemen, in practice also it would be very desirable if all teachers were well born and vigorous, devout and cultured, men inspired and endowed for their calling. Then would the moral influence of the school show itself strong enough; then would the school accomplish its higher duty of educating quite as well as it now fulfills the duty of instructing. But, alas, such ideal men can not be created at will and artificially. But, at least, I think, we may guard against this—that where they do exist they may not be frightened away from the calling in which they would be the most needed, and that, when they have once entered this class, they may not be oppressed and cramped in their development by its conditions. The teacher's calling has too long, I am sorry to say, been, so to speak, a dishonorable trade. Pardon me the expression, which is meant, of course, only in an historical sense. I grew accustomed to it in very hard times. The profession of teaching has most decidedly worked itself vigorously out of the false position into which it was brought by the travelling pedagogues, the unsuccessful theologians, and other doubtful elements and unfavorable circumstances, and I see clearly from many indications that it will continue to toil upward. But, gentlemen, I think it would be wise and just to help it in this just so far as possible, especially if, as it seems will be necessary, we are to demand of it still more intense labor, still greater exertions. It is indeed true that the State can not remove the hard, vexatious, petty, and troublesome work, with the danger it brings of pedantry and embittering; but I think that it could at least alleviate other needs and cares that oppress it. Anxiety for sustenance and social neglect still hold the teachers down and hinder them in the free development of their powers, and therefore also in their efficiency. In that, then, and in that alone, can the State help; and therefore, gentlemen, I think it is its sacred duty to do so." Dr. Paehler thought that there were two sides to the question. If the school was to help the family, so also was the family to help the school. "The method of bringing up at home is very often altogether unhealthy and unnatural. Therein, and not in overcrowding, is to be sought the cause for the ever-increasing nervousness among our youth. * * * If children are so brought up that they are continually excited and irritated, that they are offered enjoyments for which they are not ripe, nervousness must be the consequence, and, what is worse, it limits all the efforts of the school in the field of moral training." Dr. Kropatschek presented some interesting figures. In the year 1890-91 there was expended in Prussia on the elementary schools (from state funds) 55,822,310 marks—in round numbers, 2 marks per capita; for universities, 7,732,308 marks—per capita, 0.27 mark; for the higher schools 5,734,959 marks—per capita, 0.20 mark. That is all that the state of Prussia does for the higher schools. The expenditure in the other states of Germany for the higher schools was,

in 1877—in Bavaria, 0.50 mark; in Alsace-Lorraine, 0.70; Hesse, 0.66; Württemberg, 0.92; Saxony, 0.63.

Address of the Emperor at the close of the Conference.—The final session was held on Wednesday, December, 17, the Emperor being present. The thirteenth question was discussed and voted upon. The Minister of Education asked permission to close the proceedings, when the Emperor arose and addressed the Conference:

At the assembling of the conference I was not for a moment in doubt as to its course and results, and I wish to-day at the close of your labors to express to you my most complete satisfaction and gratification that you, with honest toil and in an open exchange of thoughts and opinions, have reached the goal toward which I directed you, and that you have appropriated and followed the thoughts which I indicated to you. Will you allow me, before we close, to touch a few more points that may be of interest to you?

As I hear, you were astonished that religion was not mentioned by me at the opening. Gentlemen, I supposed that my views, my ideas and thoughts, concerning religion—that is to say, concerning the relations of every man to God—what they are and how sacred and holy they are to me, lay so clearly open to the gaze of all that everyone among the people knew them. I will, of course, as King of Prussia, as well as *summus episcopus* of my church, hold it as my most sacred duty to provide for cherishing and increasing the religious sentiment and Christian spirit in the school. Let the school esteem and honor the church, and let the church on her side stand by the school, and help it forward with its work; then shall we together be in a position to fit the youth for the demands of our modern civic life. With this I think I have completely covered this point.

I can give my full approval to all that you have decided upon. I should like to mention one thing. The question of the leaving examination is not yet quite clear, and on that point I expect later another expression concerning the views and proposals of the minister.

Gentlemen, we are in a period of transition, progress into a new century, and it has always been the prerogative of my house—I mean my ancestors have always shown that they, feeling the pulse of the time, have foreseen what would come. Then they have remained at the head of the movement, which they were resolved to direct and guide to new goals. I believe that I have recognized whither the new spirit, and whither the century that is just ending, tend, and I am resolved, as in taking hold of social reforms, so also here in reference to the bringing up of our coming generation, to tread the new paths that we inevitably must tread; for if we should not we would be compelled to in twenty years. Therefore you will all have a feeling of particular satisfaction and joy that you were the ones who were chosen to fix the basal principles of our new career, to work with me to open the new way in which we will lead our youth in the future; and I am convinced that the blessings and benedictions of thousands of mothers will be called down upon the head of every one of you who have sat in this conference. I except no one, neither those who have labored to advance my views, nor those who with severe struggles and the surrender of that which they had hitherto considered themselves right in following, have brought a sacrifice—all these I thank. May the sacrifices that they bring give them also the feeling in time to come that they have accomplished an important part in this work.

Gentlemen, although as a rule I do not willingly read aloud, I should like to present to you an article which I consider so noteworthy, which I deem so well written, which renders my thoughts so completely when I spoke to you some fourteen days ago, that I wish to read to you the most important sentences. It was published in

the Hanover Courier for the 14th of this month. Under the heading "Misunderstandings" are found the following sentences:

"He who has become fully conscious of the powerful contrast between then and now will, at the same time, be filled with the conviction that the new civic life is worth being preserved, and that it is a task worthy of a man's full powers to co-operate in the preservation and further development of this civic life. That the greatest freedom must be left to the teacher in the presentation of an unpleasing past is self-evident; but it is quite as self-evident that only those are called to be the teachers of our youth who stand loyally and with complete conviction upon the ground of the monarchy and the constitution. A partisan of a radical Utopia is no more useful as a teacher of the young than in the offices of the National Government. The teacher is, according to his duties and his rights, preëminently an officer of the state, and, moreover, of the existing state. In the active discharge of the duties of his position the teacher would, to a great extent at least, have already accomplished that which is required of him toward making the youth capable of resisting subversive endeavors. The further question of an active care for the formation of character, of an independent thought and judgment, as well as the question how far our present body of teachers fulfills the duties as here sketched for them, we will speak of another time. But no one can seriously think that the doctrines of social democracy can be discussed singly in the schools, and either by authoritative expression or in free discussion refuted. Whoever is permeated with a clear understanding of the nature of the state, of the origin and progress of our state, will be in a condition to see through the absurd, the objectionable, and the dangerous elements in the theory and practice of social democracy, and he will recognize it as his duty manfully to assert his place in the ranks of those who defend our state from hostile attacks from within as well as from without. It remains the supreme task of the Government to preserve the lasting sympathies of all temperate and judicious classes by intelligent advances in the sphere of the public welfare and freedom.

"Another complaint that is based upon misunderstanding is this, that destruction is threatening our entire classical culture. We believe it is not the true friends of this culture who give expression to this fear; at least we can not spare them the reproach that they have only a very superficial idea of what is to be understood by the phrase 'classical culture.'"

Gentlemen, the man who wrote that understood me, and I am grateful to him that he has sought to diffuse these views among the people.

Permit me to say one word concerning our military educational institutions, the cadet schools. They have been brought forward here as examples, and the wish has been expressed that their organization might be transferred to the other higher schools. Gentlemen, the cadet corps is something unique, has a definite purpose, exists independently, stands directly under me, and does not concern us here in the least.

To resume briefly, I should like, before I close, to mention another foundation principle of our house which has been cited to-day by a prominent member: *Suum cuique*, that is to say "to each his own," and not "the same for all." That principle we are following here in this assembly and in that which you have decided. Hitherto, if I may so speak, the way has lead from Thermopylæ by way of Cannæ to Rossbach and Vionville. I would lead the youth from Sedan and Gravelotte, by way of Leuthen and Rossbach, back to Mantinea and to Thermopylæ. I believe that is the right way, and that way we must go with our youth.

And now, gentlemen, my heartiest thanks and my most complete acknowledgment for all that you have hitherto done. I have embodied my thoughts and my commands for the further development of this matter which is so near all our hearts in a cabinet order, which I will now ask the gentlemen to listen to.

CABINET ORDER READ AT THE CLOSE OF PROCEEDINGS.

It has filled me with joy and satisfaction to have been a witness of the earnestness and devotion with which all the members of the conference summoned for discussion of the school question have contributed to advance this matter which is so important for our nation and is especially so near to my heart. I can not therefore refrain from expressing to all the members my full appreciation and my royal thanks. My best thanks are due you especially for the no less skillful than vigorous direction of the proceedings. I am glad to be able to say that the hopes which I cherished at the beginning of the deliberations have been brought essentially nearer their fulfillment through the results reached. In order to be able as soon as possible to come to definite conclusions on the basis of the rich and valuable material obtained for the accomplishment of the work of reform, I call upon you to submit to me as soon as possible plans for the formation of a committee, consisting of from five to seven men, to whom will be given the following task:

(1) To look through the material, to examine it, and to report in the shortest time possible, and

(2) To inspect individual institutions well known as especially good for the purpose of completing the material gained, on the practical side.

I give myself the hope that it will be possible for you to prepare and lay before me on the basis of these preliminary labors a plan for the important reforms in the system of higher instruction, with reference also to the necessary financial measures, at so early a date that the new plan can go into effect on the 1st of April, 1892. I expect that you will report to me from month to month concerning the progress of the matter.

I have it in my heart to mention still one point. I do not fail to recognize that in carrying through the new reform plans considerably increased demands must be made on the whole body of teachers. I have confidence, however, both in their sense of duty and in their patriotism, that they will give themselves with loyalty and devotion to their new tasks. On the other hand, I consider it indispensable that the external relations of the teachers as a class, their rank and incomes, should receive corresponding adjustment, and it is my desire that you keep this point especially before you and report to me on the same.

Given at the palace in Berlin, December 17, 1890.

To the MINISTER OF SPIRITUAL, EDUCATIONAL, AND MEDICINAL AFFAIRS.

Reform committee.—In accordance with the recommendation contained in the cabinet order, the following committee was appointed: Chairman, Dr. Hinzpeter; Dr. Schrader, Dr. Fiedler, Dr. Graf, Dr. Kropatschek, Dr. Schlee, Dr. Uhlhorn. The committee met for the first time on January 6, 1891, again in February, and has been at work since; but its proceedings have not been officially made public at this writing.¹

DECISIONS OF THE CONFERENCE.

In regard to questions 1 to 4.

I. 1. In the future only two kinds of higher schools are to be retained, namely, gymnasiums with both ancient languages and schools without Latin (higher real-schools and higher burgher schools).

2. At the same time it is desirable that for cities whose real-gymnasiums are discontinued suitable transition forms, according to local conditions, may be devised and instituted.

¹ See "The Final Result," p. 415.

II. 1. A common substructure for gymnasiums and schools without Latin is not to be recommended.

2. At the same time until further discussion it is to be considered as admissible according to local needs.

(a) To extend the existing uniformity in the three lower classes of the gymnasium and the real-gymnasium to Lower Secunda inclusive, while from Upper Secunda on the programme of the higher real-school is followed.

(b) Or to advance the Latin in the real-gymnasium to lower Tertia and to amplify the three lower classes without Latin into a higher burgher school.

III. 1. It is desirable to diminish the total number of hours of instruction in the gymnasiums.

2. A diminution of the hours of instruction in the ancient languages, in accordance with this purpose, is possible, if in general an introduction into the classical writers is striven for as the chief object and grammatical exercises serve substantially as means thereto.

The diminution in the total number of hours ought to fall in part upon ancient languages and in part upon other branches.

3. Latin composition as a prime accomplishment is to be dropped.

4. Greek transposition exercise for Prima is to be dropped.

5. The introduction of English into the gymnasiums is recommended, elective or obligatory, according to local conditions.

6. It is recommended to make drawing in the gymnasium obligatory above Quarta (to upper Secunda inclusive).

7. It is recommended to drop drawing in Sexta.

8. Under all circumstances the greatest emphasis is to be laid upon the instruction in German, the number of hours is to be increased so far as possible, and above all perfection in German expression is to be aimed at in all lessons, especially in translation from foreign languages.

9. A more thorough treatment of the recent history of the Fatherland is to be obtained with proper limitation of the other historical material, without increasing the number of hours hitherto devoted to the instruction in history.

The conference expresses to the royal administration of schools its most respectful and warmest thanks for the declaration made at the beginning of its deliberations, that it desired to promote a greater freedom and variety in the programmes and instruction of the individual schools, according to the particular needs of the same, in the conviction that precisely in this way the higher school system would be advanced in an especial degree.

In regard to question 5 it is recommended—

(a) In places where there are only gymnasial or realgymnasial institutions to introduce instead of Latin in the three lower classes, according to local requirements, increased instruction in German and modern languages in additional courses.

(b) In places where there are only higher schools without Latin to add instruction in Latin in the three lower classes, according to local requirements.

(c) To reduce all institutions with seven grades (progymnasiums, real-progymnasiums, and real-schools) to six-grade institutions, and to set a leaving examination at the close of the sixth year of these classes.

(d) To shape the programmes of the real-schools and higher burgher schools alike, and arrange both so that without detriment to the different methodical treatment of the subjects of instruction and to the termination of the course of study, their continuation in the higher real-schools may be made easier.

In regard to question 6 it is recommended to introduce at the completion of the sixth year in the institutions with a nine years' course of study an earlier relative ending, out of consideration for those pupils who enter life before the completion of the nine years' course.

In regard to question 7.

1. The highest number is to be reduced even in the lower classes to forty scholars.

2. A higher school should never have more than four hundred scholars.

3. Parallel divisions are to be avoided as much as possible in the higher classes.

4. The separation of *Tertia* and *Secunda* according to years is, as a rule, desirable.

5. The number of hours for the scientific teacher ought never to exceed twenty-two per week.

In regard to questions eight and nine.

1. The diminution in the number of hours per week of instruction proposed by the conference ought not to cause as a consequence an increase in home work.

2. The transferring of the chief work to the school made necessary by this proposition demands an improvement in the methods of teaching.

3. The following prerequisites for fulfilling the demands made on teachers and scholars are indispensable, even if they must in execution be suited to local conditions (with the exception of the desired reduction in the size of classes):

(a) Pedagogical preparation of the teachers.

(b) Better position of the teachers in all their outward relations.

(c) Limiting of special teaching and the greater responsibility of the class teacher for the physical and intellectual welfare of his pupils.

(d) Fostering games and bodily exercise, which latter are to be regarded as daily tasks; especially, therefore, increasing and elevating the instruction in gymnastics and imparting the same where it is possible by teachers belonging to the institution.

(e) Favoring the care of the body and fulfilling the demands of school

hygiene, control of the latter by a school physician, instruction of the teachers and scholars in the principles of school hygiene and in the first means of aid in case of accident.

4. Instruction in the open air for natural science and for local geography and history is to be furthered in every possible manner.

In regard to question 10.

1. The final examination in the higher schools is to be retained.

2. This is to be regarded as an examination under Government supervision for promotion out of Upper Prima. It is to be connected with the work of this class and to be limited to its lessons.

3. All the scholars of Upper Prima who have been long enough in the class to be entitled to do so should take part in the written examination unless they are unanimously excluded by the faculty as immature.

4. The simplification of the final examination is to be obtained—

(a) In the written examination by introducing a translation from Latin in the place of the Latin composition.

(b) By dropping the consideration of Greek and French transposition in Prima.

(c) By omitting Latin conversation in oral examination.

(d) By omitting geography in oral examination.

(e) By dropping written and oral examination in Hebrew.

(f) By excusing from examination in religion and history in case of good class record.

5. A mathematical or a mathematico-physical thesis belongs to the written examination, which shall consist in solving a mathematical exercise or in the comprehensive exposition, explanation or criticism of truths and propositions taken from the mathematical or mathematico-physical instruction.

6. It is recommended also to excuse students from oral examination in case all the examination papers without exception are satisfactory.

7. It is recommended that more definite provisions be made in regard to the admissibility of substitutions.

8. In the supplementary examination of graduates of real-gymnasiums, theses only of the same kind as those of the graduates of gymnasiums are to be prepared. In the written examination that in ancient history is dropped.

9. The simplification in the final examination for real-institutions will be arranged by the educational administration corresponding to the regulations for gymnasiums.

10. If the right to one-year military service is made conditional on passing the examination for the completion of Lower Secunda, it is recommended to shape this examination in the same way as in the corresponding six class schools.

In regard to question 11:

1. Fundamental changes touching the scientific preparation of those preparing to be teachers in higher schools are not demanded.

2. The university and its means of culture have hitherto proven themselves sufficient for their scientific preparation.

3. It is recommended to give students the necessary direction by preparing courses of study with instructions.

4. It may be expected that on the part of the university the practicability of the studies of these plans will be correspondingly assured, and especially that provision will be made for more general and comprehensive lectures on different scientific subjects.

5. The assembly greets with satisfaction the proposed course of the educational administration for the further preparation of teachers; for example, beginning the course in archæology, offering traveling scholarships, etc.

6. School instruction in living foreign languages is to have the duty of leading to thorough oral and written use of the same. The university instruction in the same branches has the duty to increase as much as possible ability in this direction.

In regard to question 12:

The higher institutions of learning may influence the moral culture of their pupils—

1. Independently—

(a) By careful general discipline.

(b) By cherishing and fostering religious tendencies, both by means of instruction in religion and by means of appropriate school devotion.

(c) By suitable application of the moral and patriotic subjects in the instruction in history and in explaining authors.

(d) By sympathetic adaptation to the individuality of the scholars (which presupposes moderately filled classes).

(e) By limiting the system of special teachers.

(f) By the typical deportment of the teacher thoroughly trained as an educator.

2. In coöperation with the family—

(a) In the discipline and supervision of the pupils outside of the school.

(b) By tactful home-visiting.

(c) Through the school regulations and school celebrations.

Parents are to be encouraged in a suitable way to such associations.

3. The effectiveness of the teaching class depends on a suitable position and remuneration of the same.

4. On account of the high significance of the instruction for confirmation (communion instruction), it is the duty of the school to further the same in every manner, and especially to arrange for a suitable time for the same.

It is recommended that every school day should be begun with a short devotional service.

In regard to question 13:

1. A certificate of maturity from the gymnasium qualifies for all univer-

sity studies and for admission to the examinations, presupposing such studies for officials in the state and church service, including the medical profession, as well as for admission to the higher branches of mining, architecture, mechanical engineering, marine architecture, the postal service, and forestry.

For study in a technical high school a certificate of maturity from a gymnasium is to be supplemented by proof of sufficient skill in drawing and sufficient knowledge of mathematics and the natural sciences.

2. A certificate of maturity of a school of realistic character with the nine years' course qualifies for studying in the technical high schools and for university study of mathematics and natural sciences, as well as for the higher branches of mining, architecture, mechanical engineering, marine architecture, the postal service, and forestry.

For admission to the studies and examinations indicated under (1) a certificate of maturity of a school of realistic character of the nine years' course is to be supplemented by proof of sufficient culture in the ancient languages.

3. The certificate of maturity of the higher schools of six classes qualifies for entrance to the entire subaltern service.

Until further provision a certificate of maturity based upon the ground of an examination for Upper Secunda answers the same purpose for scholars of ninth-grade institutions.

In so far as individual civic callings demand specific special knowledge and skill more than the general amount of school instruction, the right is reserved of providing special examination for admission.

4. A certificate of maturity of the sixth-grade institutions, as well as an examination satisfactorily passed at the close of Lower Secunda of the ninth-grade institution, gives the right to one-year voluntary military service.

5. According to the calling which the gymnasium graduate wishes to follow, it is left to the administration to excuse him in part or completely from supplementary real examination in case of a specially good certificate of maturity from the gymnasium.

According to the calling which the real-school graduate wishes to follow it is left to the administration to excuse him in part or completely from supplementary Gymnasia examination in case of a specially good certificate of maturity from a real school.

6. The possibility is to be left open to every possessor of a certificate of maturity from every ninth-grade higher school of obtaining admission to such Government examination as his certificate of maturity does not entitle him to enter. For this purpose during the period of study he must pass a special examination (Fachexamen).

7. Along with the new regulations of the system of privileges that will be inevitably necessary an effort should be made to open, as far as possible, a way to an equal estimation of the humanistic and realistic culture.

In regard to question 14:

As soon as the need for higher burgher schools is increased by granting greater privileges, and also by the regulation that the right of one-year voluntary military service can be obtained in the other higher schools, also only by examination, the following general provisions are recommended for satisfying the need:

1. The former gymnasial and real-gymnasial institutions, from which it is shown that no considerable number of scholars go over to the higher schools of gymnasium or real gymnasiums, are to be transformed into burgher schools.

2. A similar transformation is to be carefully considered in the ninth-grade gymnasial and realgymnasial institutions in which the vast majority of students do not go beyond Lower Secunda and whose Upper Secunda and Prima do not have any attendance justifying the continuation of a complete institution.

3. In cities which possess several gymnasial and realgymnasial institutions of learning measures are to be taken so far as possible to transform one of these institutions into a higher burgher school. Consideration is to be had especially that in founding a new school a higher burgher school shall be established.

4. In cities which as yet possess no higher institutions of learning, preference is to be given to the higher burgher school in establishing the same.

5. To protect the interests of the minority of the inhabitants where there is no school teaching Latin, Latin instruction has to be added in the three lower classes (question 5, b).

6. The State is to support the establishment and maintenance of higher burgher schools according to the same principles as hitherto governed the gymnasial institutions. During the period of transition, especially, the State is to further higher burgher schools by the application of Government means and to come to the financial aid of the less capable cities in founding such institutions.

7. The average support of scientific teachers in the higher burgher schools as well as in all institutions of six grades is to be made equal to that of teachers in the nine-grade institutions.

8. The name real-school is recommended for the higher burgher school; it indicates at the same time its relations to the higher real-schools.

In regard to question 15.

For the control of instruction and education in the higher schools the existing organs of supervision are sufficient. Impending changes in education and the increase in the labor of the officials of supervision made necessary thereby make an increase in the number of provincial school councilors earnestly desirable.

Observations on the proceedings of the conference.—First of all one is struck in looking over the stenographic report of the discussions by the dignified and courteous tone that characterizes them. Although

the speakers represented the most widely differing views, though many of them in the course of the proceedings saw their favorite plans crushed and their life-long customs encroached upon, still courtesy and good temper seemed never to fail. The educators that met in this conference had undoubtedly been themselves truly educated.

Nothing was more prominent in the proceedings than the sharp distinction between *Erziehung* and *Unterricht*, between education in its true sense and instruction. This difference has been referred to briefly in the preface. The speaker in the conference always spoke of education as meaning the total forming of a human being in not alone mental, but moral, physical, and religious relations as well. Instruction was everywhere subordinated to education, discipline, training, development. Such phrases as "Not *what* but *how* a child learns is the important matter" occurred over and over again. "*Character-Bildung*," the formation of character, was put above all. "*Allgemeine-Bildung*," general education, was put far above technical instruction. The teacher was to be an *Erzieher*, one qualified to bring up and develop all the faculties, to touch and stimulate all the many sides of a child's nature. In this connection religious instruction was often and earnestly considered. There was an unmistakable conviction present in the minds of the members that the youth of the land were not receiving that religious grounding, were not going into life with the religious convictions that they should have, and therefore there was a good deal of feeling that more ought to be done in the way of religious instruction in the schools. Anything that looked toward an apparent lessening of the emphasis on religious instruction, such as, for example, the proposal to drop the final examination in religion, was strongly opposed not only by the clergymen in the body, but also by a majority of the teachers. There was, of course, entire unanimity as to the necessity of retaining religion as a subject of study in the public schools; indeed, no one so much as suggested that any other course was possible. At the same time, it was unmistakable that the results obtained were far from satisfactory. The conference often seemed more like a Sunday school convention than a meeting of public school men.

Latin was more considered than any other subject of instruction, perhaps more than all others together. Latin and not Greek is the heart, the center, the core, of the gymnasium. There was little said about Greek, at least about the instruction in that language. Such modifications as were proposed met with little opposition. But any change in Latin was sharply debated.

Every question and every side of a question gave opportunity, it seemed, for saying something about the condition of the teachers as a class and the necessity for doing something to improve their condition. The question of improving the qualifications of teachers and giving them better preparation for their work, awakened apparently little interest and caused scarcely any discussion. It seemed to be the thought

of the conference that the teachers were already better than the state deserved to have until it did more for them. And they were very chary about giving any expression that might look like imposing additional labor upon the teachers. Over and over and over again, relevantly and irrelevantly, in season and out, the bettering of the material circumstances of the teachers was urged earnestly and intensely. When finally Dr. Bohtz, of the ministry of finance, told them that the finances of the Government were such that there was little immediate prospect of any improvement in the way of increase of salaries, and called upon the members, instead of complaining when they went home, to do all that they could to quiet the discontent of the teachers, a deep feeling of disappointment and almost indignation swept over the members. Dr. Bohtz was asked whether he spoke with the authority of the minister or only gave his own views, and Dr. Schrader, of the University of Halle, declared that after carefully thinking over Dr. Bohtz's admonition, he had been quite unable to see how he could do what was asked of him. The words of the Emperor in the final cabinet order, however, went far to inspire hope among the teachers. It is certainly worthy of consideration, when in Prussia, where all the professions are overcrowded as compared with our relations in the United States, out of two hundred graduates only three chose teaching, as Dr. Kruse stated.

A point of some interest to teachers is the general approval expressed by the members of the conference of the *Klassen-Lehrer* system, by which is meant the system of one teacher for each class, who gives the instruction in all subjects except, perhaps, drawing or some similar technical subject. Only one spoke in favor of the *Fach-Lehrer* system, or system of special teachers. The English educational journals translate *Klassen-Lehrer* and *Fach-Lehrer* as "form masters and specialists." The employment of specialists has been growing in favor in the United States rapidly, and in private schools, at least, is now almost universal. In the lower classes in college, which compare with the upper classes in the higher schools of Prussia, specialists are, of course, exclusively employed. It is therefore not without interest to note the general favoring by these prominent Prussian educators of the form master, the teacher who remains with his class as long as they are in the school room, gives the instruction in all branches of study and maintains the entire discipline. This plan, however, was not favored on the ground that it was better from the standpoint of instruction; almost the sole ground urged, and the one that seemed quite sufficient, was that of the superior influence in the way of developing the character, in the way of *Erziehung*, that could thus be exerted by the constant contact with one man. Thus a definite force would be brought to bear, whereas otherwise there would be so many differing forces that no definite and lasting impression whatever would be produced upon the scholar. It was not denied that, so far as pure instruction went, specialists could do better; but that was entirely secondary to the other and higher aim of the schools.

The social democrats were only occasionally referred to, and that quite incidentally. It was evident that the members of the conference did not agree with the Emperor in thinking that the schools were responsible for the spread of social democracy. A note that sounds strange to American ears was often sounded in the proceedings, namely, the danger of increasing the educated class. We are so accustomed to hearing the cry of higher education for all who can possibly get it, so thoroughly imbued with the belief that education is in itself a benefit that men or women will be just so much better for having the highest education they can gain, no matter what use they may afterwards make of it, that it sounds strange to hear it said that the best education must be carefully kept for the best people (Helmholtz), and that merchants and others are positively damaged by having too good a training. The conviction of the conference was unmistakably that a college education was not a good thing, except for those who were to be chosen to fill the highest positions in the state, in the church, and in society. The feeling of caste which prevents a graduate of a Prussian high school from entering a trade or going into business because the learned professions are of a higher social grade—this feeling, which, and not the organization of the schools, has produced the “hunger candidates”—is happily lacking in the United States. Until it develops—may that time never come!—it will probably not be necessary for the educators of the United States to discuss seriously the best means of scaring boys away from the high schools and colleges.

Most of the speakers referred to their own school days, and said if things were now as they were then there would be no need for reform. The gymnasiasts were not only in the majority, but they were moreover the best speakers and debaters. Dr. Göring, the radical member, had little support and little sympathy, and his main address is evidently that of the leader of a lost cause.

What were the net results? How much had the reformers gained? What party was satisfied? The strict advocates of the ancient classics complained of the threatened reduction in the classical instruction. The friends of the Realgymnasium were of course without any consolation. The friends of the union middle school saw scarcely one of their wishes fulfilled. All complaints united in the cry, “We will have more gymnasia and worse ones.” The gain was not so much in any one great, striking change, unless the action in regard to the Realgymnasia be considered, as in a multitude of items that tend to greater freedom in the programmes and less overcrowding for the scholars.

IV.—SUBSEQUENT PROCEEDINGS.

Views of a leading realgymnasiast.—Cauer, of Kiel, in the Preussischen Jahrbücher speaks thus of the results:

The old gymnasium has conquered; the realgymnasium is laid on the shelf; thus is the new condition designated. And, indeed, the existing realgymnasia are

reduced to the last extremity: they must either change themselves into gymnasiums by adding Greek or into real schools by dropping Latin. Such a development in itself would correspond to the interests of the realgymnasium, for Latin was a foreign element in the programme of the realgymnasium, its increase in 1882 a decided mistake. Since the opinion exists in many influential quarters that the transition should be made gradually and not forcibly, and that regard should be had to local needs, the friends of the realgymnasium might well be contented to see these schools once more approached to the purer and fundamentally sounder form of a real-institution without Latin and with nine classes, provided that these were made capable of living by receiving the necessary external privileges. But precisely this provision fails. It is true the real-schools of hitherto (eleven in Prussia) receive an accession since the right of preparation for the higher branches of mining, architecture, and machinery, that was taken away from them in 1886, is given back again, and the right to prepare for the postal service and for forestry is to be added. But the real-institutions as a whole suffer severe damage in that the right of qualifying their students for the study of the modern languages, that has hitherto belonged to the realgymnasia is taken away, and at the same time the prospect is opened that they will lose the right of admission to the study of mathematics and the natural sciences as soon as the instruction in Latin is entirely given up. When one considers with what difficulty the upper classes of the realgymnasium have maintained themselves, even up to the present, there can be no doubt that with the privileges of the graduates actually diminished they will become deserted in the future. The consequence will be that not only the realgymnasia but all the nine-class real-institutions will gradually disappear, with perhaps the exception of isolated specimens in the great cities, and that at last the gymnasium will remain the sole institution that prepares for a higher career. Have the friends of the latter cause to rejoice on that account? At least the gymnasia can not lack pupils in the future. But there has never been any lack of that sort. What of the programme? The complaint became at last universal that it was too diversified, that it did not aid the scholar to a symmetrical education of the intellect, but that it gave a multitude of facts that were soon forgotten; that the scholars in Prima and Secunda could not reach a fresh and enjoyable reading of the ancient classics, because they had to vex themselves so much over the grammar that the multitude of different requirements had led to an unendurable overloading with home work. These are all earnest and, as we must admit, fully justified complaints. In order to redress them the conference has decided to increase the number of studies a little more by making drawing obligatory in the middle classes and introducing English in the higher classes. But that is not the only contradiction. The instruction in the ancient languages is to be made more intense and more successful and at the same time shortened by several hours a week. The whole number of school hours per week is to be reduced and at the same time the amount of home study diminished by transferring the principal work in learning to the school. Finally, all these impossibilities are to be made possible by improving the methods of instruction. Our Emperor certainly spoke from the heart when, in his opening speech, he condemned those schools that further a half-culture and thereby create an incompleteness for life. This judgment would apply to none of the existing kinds of schools so well as to the gymnasium if it should be organized according to the conclusions of the conference. It will be answered that at least one discordant feature from which the present gymnasia and realgymnasia suffer will disappear in the future, the right to one-year voluntary military service. In reality definite declarations of the minister of education had aroused the liveliest confidence in this respect. All the more painful is the disappointment in just this point. The important privilege of dismissing scholars after the sixth year of the course with the right to one year service is to remain with the nine-class schools, but its exercise is to be limited in that in its place a special examination is to be introduced. So the splitting of the nine-year

course which, without intention on the part of any one, has been gradually preparing under the influence of the one-year right is finally completed. But is not all the harm outweighed by the fact that in future the aspirants for uniforms will generally turn their backs on the gymnasium and go to the higher burgher school? This hope was at least often expressed in the conference, but on what it is based has not been said. If gymnasium and higher burgher school are alike in this, that in both the one-year certificate can only be obtained by a special examination, but are different, in that the burgher school prepares only for entrance into the subaltern service while the six lower classes of the gymnasium bring about entrance to the higher gymnasium, and so the admission to all the higher professions, one need be no prophet to foresee that parents will give preference to the gymnasium in the future quite as much as they have in the past.

Changes in the cadet school.—In a special order of the 13th of last February the Emperor recommends a change of the course in the cadet school in the following respects:

(1) The end and aim of all education, especially of the military education, is the formation of character, resting on the harmonious coöperation of physical, scientific, religio-ethical education and discipline. No side of education should be made prominent at the cost of others. But at present the scientific programme of the cadet corps, according to my observations, makes too extensive demands upon a large number of pupils. The course must be simplified by the exclusion of every unessential detail, especially by thoroughly sifting the memory material, so that even the less-gifted pupils may be able with suitable diligence to follow the instruction without overpressure, and to complete the entire course in the prescribed time. What the instruction loses in this extent by this means it will gain in thoroughness. The teachers in all branches and in all grades will immediately have to adjust their methods in this respect.

(2) In every simplification, however, the instruction must be made still more practical, so that the cadets not only may gain the knowledge and skill immediately necessary for the military calling, but also may obtain a mental equipment which will render them more capable themselves to exert in the future a moral and instructive influence in the Army, the great school of the nation, or in case they should later enter another than the military calling to fill their places there also.

In religious instruction the ethical side must be made prominent, the chief stress laid upon educating the pupils in the joy of faith and the fear of God, to strictness toward themselves, to patience toward others, and upon establishing them in the conviction that the practice of fidelity and devotion to ruler and fatherland, as well as the fulfillment of all duties rests upon divine commands.

The instruction in history, more than hitherto, must give a knowledge of the present, and especially the position of our fatherland in it. Accordingly, German history must be more strongly emphasized, especially that of modern and most recent times, but ancient and mediæval history must be taught in such a manner that the pupils shall be impressed with examples of heroism and historical greatness even from those epochs, and also obtain an idea of the roots and development of our culture.

Geography, political as well as physical, while beginning in the lowest grades with the home must first of all supplement and support the historical instruction in the different grades. The further end of geographical instruction is to bind the pupil most intimately with his fatherland, but also to teach him to understand and value foreign lands.

German becomes the center of the entire instruction. In every subject the pupil must be instructed in the free use of his mother tongue. Even in the hours devoted to German, as well as in the instruction in literature, in the choice of the pieces for reading, in lectures and essays, special consideration must be given not only to clas-

sical antiquity, its legends and culture but also to German legends and the literature of the fatherland, and the pupil should also be made acquainted with the mental life of other important civilized nations of the present, by an introduction to separate masterpieces of their literature.

In the instruction in modern foreign languages, the stimulation and instruction of the cadets in the practical use of the languages should be kept in view from the first grades.

The programme of the cadet corps, as revised according to this order, lays special stress upon modern languages and modern history. Of the 20 hours devoted to history during the gymnasium course, 16 are devoted to modern history since 1415 (geography is taught with history in *prima* and *ober-prima*), and only 2 hours to ancient and 2 to mediæval history. Of the 136 hours devoted to languages, 50 are for Latin, 21 for English, 37 for French, and 28 for German. Much instruction in the mother tongue is given also of course in the other branches, 15 hours are devoted to geography, and the remaining 117 hours are divided among the following subjects—religion, mathematics, natural history, physics, chemistry, drawing, and writing.

This order is deemed especially important because in it the Emperor has shown his hand. It contains his freely expressed opinion. The reformers see in it the beginning of the end, and maintain that while the change is intended first for the *Cadettenanstalten*, the Emperor's purpose is to extend it to other schools. By a simple order the Emperor can change the programme of the cadet corps; but time and indirect methods are demanded to effect any great change in the public schools.—[W. H. Burnham in *Pedagogical Seminary*.]

Attitude of the educational administration.—How uncertain the attitude of the educational administration is may be seen from the remarks of the Government Commissioner Standar, in the debate of the committee on education late in May. After denying that the conference had been formed in a one-sided and biased manner he observed that in material directions the decisions of the December conference after they have received the highest sanction form a fixed point of departure for the further decisions of the administration. The great pedagogical issues, however, which connect themselves with the "greatest possible equal valuation of the humanistic culture with the realistic" must be weighed still more thoroughly by the ministry of education before a definite conclusion can be arrived at. If the reform of the schools is begun on the basis of the decisions of the conference the administration has nevertheless the intention of striving for a gradual clearing up of the questions involved, which can not be solved theoretically by means of further practical experiments. The entire procedure of the administration in the matter of reform, in agreement with the conclusions of the conference, will be marked by a far-reaching attention to the interests of the scholars, the parents, and the communities.

From this it is seen that the decisions of the conference are a "fixed point of departure" for the educational administration, but at the same time it has come to no conclusion concerning the great pedagogical issues.

Attitude of the association for school reform.—At Pfingsten, 1891-Whitsuntide, the Verein fuer Schulreform (Association for School Reform) held its general meeting in Berlin. In his report the president

stated that after the school conference the association had directed its efforts to demonstrating that the demands of the Emperor could not be fulfilled in the way indicated by the conference. The petition from the association, with which the committee of education had recently occupied itself, and which would shortly come before the House of Deputies itself, furthered this object. Moreover, a direct petition to the Emperor had been prepared, which prayed that the school reform might take the shape of a common six-class substructure for all the higher schools. In the Prussian cities, with only a single high school, this petition had been signed by seventy magistrates, fifteen of them being from cities in which the single high school is the gymnasium.

The meeting adopted the following resolutions:

1. Whereas His Majesty the Emperor, at the beginning of the December conference, made German the basis of the future higher school instruction, and wished to see the national spirit furthered more and more in history, geography, and legend, and demanded moreover that the scholar should be prepared for the practical life of to-day, and that the amount of intellectual labor should be lessened in favor of physical development, and that the number of Gymnasias should be limited and the examinations simplified, His Majesty has thereby indicated to the higher school system the lines for a flourishing further development.

2. The December conference, in its attempt to adapt itself to these demands, has not entered upon the way for a hearty recognition of the same by an organic transformation of our higher school system. It is rather to be feared that its conclusions as they are now clearly to be recognized tend to the strengthening of the monopoly of the gymnasium with all its evils; do not demand enough with respect to the development of the national spirit; stop far behind the demands of practical life; increase the overloading, and in spite of that allow neither the culture value of the linguistic-historical nor of the realistic branches to attain their full worth.

3. The Association for School Reform stands now as before firmly by the programme of the united six-class middle school as the common substructure for all three existing classes of higher schools, with such a standard that the need of a Latin preparation for the later pupil of the Gymnasium and Realgymnasium shall be satisfied from under *tertia* without increasing the number of hours. The association holds this programme to be the only practical way of meeting the demands of the Emperor, and for terminating the agitation for school reform in a manner that promises to be lasting.

As important preparations for this end it greets the decision of the conference to endeavor to introduce a closing point after the first six years of study, and the promise of the government to allow a greater freedom and diversity to prevail in the programme and instruction of individual schools according to particular needs.

Still more important does it seem to the association with respect to its programme that by the complete equalization of all three classes of high schools, the free capacity of which may be demonstrated, and especially that through numerous practical attempts in Gymnasias and Realgymnasias, it may be shown with what success the beginning of instruction in the two ancient languages can be postponed to higher classes than before.

Action of Frankfurt.—In March, 1891, the city council of Frankfort-on-the-Main decided to send a petition to the Prussian minister of education. The main points of the petition were:

- (1) That the minister should permit the city to maintain its Realgymnasium untouched by the reform which seemed to be demanded.

(2) That in one of the two city Gymnasias, as an experiment, the instruction in Latin should be begun in lower tertia, and that in Greek in lower secunda.

Action of the Association of Saxon Engineers and Architects.—The Association of the Saxon Engineers and Architects, meeting on the 1st of June in Dresden, adopted the following report: In the belief that the proposed school reform for Prussia will not remain without influence on the school relations of Saxony, the Saxon Engineers and Architects' Association declares:

(1) The preparation for the study of the technical science must aim at the same amount of intellectual ripeness as is required for the study of the old faculties.

(2) The existing nine-class Realgymnasias in Saxony answer this demand, and therefore give no occasion for reform.

(3) The nine-class Realschool, without Latin, and destined in Prussia for the preparation of technical man, is, on account of its preponderating realistic stand, been less suited for preparation for the study than the humanistic gymnasium. For, if the latter lacks certain advantages for preparation of technical studies, it still offers in every case the required measure of intellectual ripeness; the latter should therefore have the preference.

(4) As the goal for the school must be worthy to be striven for, in Saxony also, the nine-class Gymnasias, with the united substructure and separate higher schools in each of the six lower classes (sexta to lower secunda), agree completely in their study programmes, and the separation according to the humanistic and realistic sides takes place only in the three higher classes (higher secunda, lower and higher prima).

(5) To attain this goal the equal qualification of both sister institutions, humanistic and Realgymnasias, through admission of their graduates to all studies, is to be striven for.

Debate in the Committee on Education of the Chamber of Deputies.—The substance of the petition presented to the Prussian Chamber of Deputies was to the effect that the reorganization of the higher school system planned to go into effect April, 1892, should be cut loose entirely from the conclusions of the December conference, and turned into the direction proposed by the association; that is, a union school with six classes, branching into three divisions, which should correspond to the present Gymnasias, Realgymnasias, and higher Realschools.

This petition received the careful consideration of the committee of education. Deputy Seyffardt (national liberal), who reported on it, agreed with the views of the petitioners, that the former minister of education had not kept the promise made in the session of March 20, 1890, to call together a commission of inquiry composed of typical representatives of the different tendencies; that he had given undue prominence to the ancient classical humanistic tendency in the same, and

that he had entirely suppressed the lay element beneath the professional element. The agreement of the old gymnasial majority with the demands of the Emperor and King was a purely formal act, and on both external and internal grounds could never lead to the reform in the German and modern spirit which should correspond to his wishes. The conference, as has been frequently claimed in the press and never contradicted, gave the appearance of having been summoned to aid the advocates of the supremacy of the classical gymnasium to a bloodless, victory.

Among the educators there were against ten directors and teachers in Gymnasia only two directors of Realgymnasia and three of other real institutions. It was certainly not an enviable position in which these highly honorable men, eminent scholars and lights of their profession, saw themselves placed, when, after the opening of the conference, they became aware that they must labor under presuppositions which were essentially different from the purposes for which they had been called.

Quite as surprised were the representatives of the ministry of war, which, in the intention of meeting the views of the Emperor, had provided a memorial for the conference that emphasized the necessity of giving further privileges to the real gymnasium, whose course is identical with that of the cadet schools. The recognition of this necessity by the war ministry was the result not alone of the conviction of the excellence of these institutions. It was also for the interest of the army not to see the numerous officers who were obliged to leave the service on account of the required reduction in age shut out from employment and positions for which they must be considered capable, on account of their preparation. These facts gave unmistakable proof that the unfavorable opinion of the Emperor concerning the Realgymnasia came to him only in the last moment.

Least of all could the hundreds of thousands of men in practical life, whose sons form nine-tenths of the scholars in our higher institutions, with all due respect for the persons called together in the conference (among whom are only two of their own class), recognize an authority which was at all competent to decide upon their needs and to put into practical execution the reform ideas of His Majesty. The practical execution of the views of the conference was not possible without the agreement and coöperation of the Diet. Previous unfortunate experiences suggested the greatest foresight, and it is greatly to be feared that the monopoly of the Gymnasia will be increased in an unheard of manner. It was urged in opposition of the assertion of the petition that the conclusions of the conference would not prepare a way for the carrying into effect the views of His Majesty, that the shelving of the Realgymnasia was not in opposition to the views of the Emperor. That was only apparently to the purpose. His Majesty wished the truth and the right way to attain it. If the Realgymnasia could

be called a new work it was still old enough to have conquered for itself in the course of its historical development during sixty years the right of existence. The affirmation that higher real schools served the ends of industrial callings immeasurably better than the Realgymnasia was altogether and completely unjust, since all the elements whose social position made necessary coöperation in the affairs of the community, province, and state could not dispense with a certain sympathy with the culture of the learned, involving, at least, the knowledge of one ancient language.

The discussion in the committee took a somewhat wide range. There was by no means unanimous agreement in the views of Deputy Seyffardt, though the sentiment of the committee on the whole sympathized with him. It was voted to refer the petition to the Government as material for framing future legislation.

Remarks of Dr. von Gossler's successor.—In a debate in the Chamber of Deputies in reply to certain criticisms of Deputy Schmelzer, the new Prussian minister of education, von Trützschler expressed himself as follows in regard to the question of school reform:

Deputy Schmelzer has brought forward the weak points in German education in a drastic manner. In reply, I would call attention to the fact that the purposes of the recent movement is to do away with these evils, and that the complaints of Deputy Schmelzer might better be directed, not at the central administration, but at individual educational institutions. The regulations are already so shaped that we may expect from every graduate a thorough training in German. For the most part I can agree with the Deputy Virchow, in his remarks, but I believe that his unfavorable criticisms on the present reform movement arises from a wrong conception of what is intended. So far as I have been able to study the results of this reform movement, up to the present time, the anxieties that he has expressed in regard to the Realgymnasium is without foundation. The educational administration at least, and especially I myself, are quite clear on this point, that in the sphere of the school system there can be only an organic continuous development from the existing and cherished order, and that there can be no question whatever of an irregular interference with, and complete overflow of, the regular school institutions. I say this with the express intention of having it heard in the country, in order that the manifold anxieties which have been aroused, especially with regard to the Realgymnasia, may be dissipated.

A rule should not be given to the individual teacher, as is the case in other states, according to which he must adjust himself so that the instruction in every institution is each day the same, and one can say, "to-day Cæsar is read in all the schools, and to-morrow, Ploetz." But complete free will is also impossible. The middle line between absolute regulation and complete freedom will surely be the best, and to attain this will not be the task of the minister of education alone, but all the local boards will have to coöperate thereto. But if Deputy Virchow complains especially in the case of the Realgymnasia that further privileges have not been granted them, I would reply that the educational administration is not to blame for that, but rather the universities. But this shall not so cramp the new reform but that practical experiments in different places, if possible in all the Prussian provinces, shall be made with the proposed new order of things. I place so much importance on this point that I have already conferred with the gentlemen of my ministry as to how such practical experiments can be arranged. I am of the opinion that the whole question can not be finally decided for a long time to come, and that the scientific

examination and the practical attempts must be carried out much better than is possible to-day.

That does not exclude us from reaching out our hands to improve in many directions. I consider it necessary that our youth should have a freer exercise of their physical powers through further extension of the system of gymnastic training, and that our teaching class must be elevated in regard both to its internal and external conditions. We will not make these things dependent upon the legal regulation of the reform of the higher school system. It is not to be doubted that the latter is constitutionally demanded, and I recognize the duty of striving to attain it most fully and completely. But I believe that, after the representations that I have given, it would be a false way to combine the new reform of the systems of higher schools with the common-school system. In that case I would be treading the same path as my predecessors, who attempted that, and I would not find it possible, no matter how long it might be my privilege to occupy this position, to reap the benefits in respect to the middle and higher classes of the experiences which I consider must be had before we can arrive at a legal determination of the question.

Therefore I beg that, if I mentioned in my inaugural address the necessary legal regulations, to consider that I intended this, so far as its practical execution was concerned, to refer to the common schools only. I have declared myself in favor of that. The regulations of the higher school system I will reserve for subsequent action.

Effects on attendance.—A member of the committee on education is authority for the following figures, which show the disquieting effects of the decisions of the Berlin conference in the circles whose sons have hitherto attended the Realgymnasium:

In Dortmund, a city having a gymnasium, real gymnasium, and a higher burgher school, the number of new scholars received by the Real gymnasium at Easter was, in 1886, 70; in 1888, 82; in 1890, 111; in 1891, 44. The number of scholars who left at Easter for various reasons was, in 1886, 40; in 1888, 42; in 1890, 40; in 1891, 67.

The number of scholars in Sexta was, in 1886, 58; 1888, 60; 1890, 83; 1891, 36. The number who left to go to other schools was, in 1886, 11; 1888, 12; 1890, 13; 1891, 38.

In the real gymnasium in Cassel 117 new scholars were received in 1890; in 1891, but 71. In 1890 there were 94 in Sexta; in 1891, 70.

The real gymnasium in Charlottenburg received about 100 new scholars at Easter, 1890, and about 50 at Easter, 1891. The relation holds true of the real gymnasium in Frankfurt.

Action to be taken by the Government.—A decisive step in reference to the carrying into effect of the school-reform project is about to be taken in Prussia. The most important pre-requisite for school reform on the basis of the determination that was arrived at by the December conference and approved by the Emperor is the new regulation of the system of privileges of the higher schools. The *Reichs Anzeiger* says (July 27) that this question has been thoroughly treated by exchange of letters between the different ministries and in sittings of the ministry of state, and the agreement has been arrived at that the graduates (abiturienten) of the higher real schools in Prussia shall be admitted to the architects', machinists', miners', and foresters' callings, as well as to

the study of mathematics and the natural sciences, with a view to positions as teachers. The same would be true in the state service, for the post and telegraph systems, marine architecture, and marine engineering. A higher real school will thus be made essentially equal, so far as privileges are concerned, to the Realgymnasia. As for the higher burgher schools, their certificate of maturity will in the future admit to the entire subaltern service, while this was previously the case only in regard to the judicial subaltern service. Thus, the higher burgher schools will be able to take root in sections, which are comparatively little developed in industrial directions. The right to one-year voluntary military service will be so regulated that the advantages previously possessed by scholars of the nine-year institutions, as well as of the seven-year institutions, of being able to acquire the certificates of this right merely by promotion to Higher Secunda, will cease. In the future, in these institutions an examination will be held under direction of the state commissioner at the close of a six-year course, and the obtaining of a certificate for the one-year service will be made dependent on passing the same. Through this the inequality which has hindered the extension of the higher burgher schools will be done away with. Hitherto they required their graduates to go through a complete examination in order to obtain a certificate. Now a practical experiment will be tried as to whether the Realgymnasia will be able to maintain their position by the side of the higher real schools under the changed circumstances.

APPENDIX.

PROGRAMMES OF THE HIGHER SCHOOLS OF PRUSSIA, BAVARIA, WÜRTTEMBERG, SAXONY, AND BADEN.

In the federation of Germany public instruction remained the affair of the individual states. Each state of the Empire has, therefore, an independent school system. These various systems, however, resemble one another closely, and the Prussian system has had a preponderating influence on them all. There are, nevertheless, considerable differences. The *Allgemeine Zeitung*, of Munich, in commenting on the Emperor's speech at the opening of the conference, dwelt with pride on the fact that education in the Bavarian gymnasia corresponded very fairly with the Emperor's ideal. Dr. Uhlig called attention to these differences also in the conference. In speaking of the charge that the gymnasium did not afford the most suitable training for the study of medicine, he said he had asked university professors in regard to that point, and they had admitted that there was a marked difference in the preparation of graduates of the gymnasia of different countries, especially Bavaria and Baden. The resemblances and the differences are both made clear by the following programmes:

In the year 1837 the following normal plan for the Prussian gymnasiums was adopted:

Subjects.	VI.	V.	IV.	III.	II.	I.
Latin	10	10	10	10	10	8
Greek			6	6	6	6
German	4	4	2	2	2	2
French				2	2	2
Religion	2	2	2	2	2	2
Mathematics			3	3	4	4
Arithmetic	4	4				
Physics					1	2
Philosophy and propædæutics						2
History and geography	3	3	2	3	3	2
Natural history	2	2	2	2		
Drawing	2	2	2			
Writing	3	3	1			
Singing	2	2	2			
Hebrew					2	2
Total	32	32	32	32	32	32

The normal-school plan for Prussian gymnasiums was modified by an order of the minister, January 7, 1856, when the following plan came in force:

Subjects.	VI.	V.	IV.	III.	II.	I.
Religion	3	3	2	2	2	2
German	2	2	2	2	2	3
Latin	10	10	10	10	10	8
Greek			6	6	6	6
French		3	2	2	2	2
History and geography	2	2	3	3	3	3
Mathematics	4	3	3	3	4	4
Physics					1	2
Natural history	(2)	(2)		2		
Drawing	2	2	2			
Writing	3	3				
Total	28	30	30	30	30	30

The hours for natural history in Sexta and Quinta, inclosed in parentheses, were to be used for further instruction in geography and arithmetic, in case properly qualified teachers in natural history were lacking.

Programme of the Prussian gymnasia, according to the order of March 31, 1882.

Subjects.	VI.	V.	IV.	Lower III.	Upper III.	Lower II.	Upper II.	Lower I.	Upper I.	Total.	Former total.
Religion	3	2	2	2	2	2	2	2	2	19	20
German	3	2	2	2	2	2	2	3	3	21	20
Latin	9	9	9	9	9	8	8	8	8	77	86
Greek				7	7	7	7	6	6	40	42
French		4	5	2	2	2	2	2	2	21	17
History and geography	3	3	4	3	3	3	3	3	3	28	25
Mathematics	4	4	4	3	3	4	4	4	4	34	32
Natural history	2	2	2	2	2					10	
Physics						2	2	2	2	8	6
Writing	2	2								4	6
Drawing	2	2	2							6	6
Total	28	30	30	30	30	30	30	30	30	268	268

Pupils admitted after the completion of their ninth year. In addition, instruction in gymnastics was obligatory for every scholar two hours per week. Instruction in singing was obligatory in the two lower

classes two hours per week, and in the upper classes scholars were expected to participate in the musical exercises of the school. Instruction in drawing was elective in the upper classes.

Programme of the Prussian real gymnasia, according to the order of March 31, 1882.

Subjects.	VI.	V.	IV.	Lower III.	Upper III.	Lower II.	Upper II.	Lower I.	Upper I.	Total.
Religion	3	2	2	2	2	2	2	2	2	19
German	3	3	3	3	3	3	3	3	3	27
Latin	8	7	7	6	6	5	5	5	5	54
French		5	5	4	4	4	4	4	4	34
English				4	4	3	3	3	3	20
History and geography	3	3	4	4	4	3	3	3	3	30
Mathematics	5	4	5	5	5	5	5	5	5	44
Natural history	2	2	2	2	2					12
Physics						3	3	3	3	12
Chemistry							2	2	2	6
Writing	2	2								4
Drawing	2	2	2	2	2	2	2	2	2	18
Total	28	30	30	32	32	32	32	32	32	280

Pupils admitted after completion of their ninth year. In addition, the same requirements in regard to gymnastics and singing as for gymnasia.

Programme of the Prussian real gymnasia, according to the order of October 6, 1859.

Subjects.	VI.	V.	IV.	III.	II.	I.	Total.
Religion	3	3	2	2	2	2	14
German	4	4	3	3	3	3	20
Latin	8	6	6	5	4	3	32
French		5	5	4	4	4	22
English				4	3	3	10
Geography and history	3	3	4	4	2	3	20
Natural history	2	2	2	2	6	6	20
Mathematics	5	4	6	6	5	5	31
Writing	3	2	2				7
Drawing	2	2	2	2	2	3	13
Total	30	31	32	32	32	32	189

In the numbers connected thus } the hours assigned each subject could be increased, if necessary, by reducing the number assigned to the other, gymnastics and singing to be added. In VI, V, and IV the course was one year, in I and II two years, and in III generally two years also.

Programme of the Prussian higher real schools, according to the order of March 31, 1882.

Subjects.	VI.	V.	IV.	Lower III.	Upper III.	Lower II.	Upper II.	Lower I.	Upper I.	Total.
Religion	3	2	2	2	2	2	2	2	2	19
German	4	4	4	3	3	3	3	3	3	30
French	8	8	8	6	6	5	5	5	5	56
English				5	5	4	4	4	4	26
History and geography	3	3	4	4	4	3	3	3	3	30
Mathematics	5	6	6	6	6	5	5	5	5	49
Natural history	2	2	2	2	2	3				13
Physics						4		3	3	14
Chemistry							3	3	3	9
Writing	2	2	2							6
Drawing	2	2	2	2	2	3	3	4	4	24
Total	29	29	30	30	30	32	32	32	32	276

Pupils admitted after completion of their ninth year. The same requirements in regard to singing and gymnastics as for the gymnasia.

Real schools differ from higher real schools in that the former lack the upper and lower prima of the latter.

Programme of the Prussian higher burgher schools, according to the order of March 31, 1882.

Subjects.	VI.	V.	IV.	III= Lower III.	II= Upper III.	I= Lower II.	Total.
Religion	3	2	2	2	2	2	13
German	4	4	4	3	3	3	21
French	8	8	8	6	5	5	40
English				5	4	4	13
History and geography	3	3	4	4	4	4	22
Mathematics	4	5	5	5	5	5	29
Natural history	2	3	3	3	2		13
Natural science (physics and chemistry)					3	5	8
Writing	5	3	2				8
Drawing	2	2	2	2	2	2	12
Total	29	30	30	30	30	30	179

Pupils admitted after completion of their ninth year, same requirements as for the gymnasia in regard to gymnastics. In some of the higher burgher schools free-hand drawing is obligatory four hours a week from class IV on, and in the three higher classes linear drawing is required in addition from two to four hours a week.

Programme of the gymnasia in Bavaria, August, 1874.

Subjects.	Latin school classes.					Gymnasial classes.				Total.
	1.	2.	3.	4.	5.	I.	II.	III.	IV.	
Religion	2	2	2	2	2	2	2	2	2	18
German	6	3	3	2	2	2	2	3	3	26
Latin	7	10	10	8	8	8	8	7	7	73
Greek				6	6	6	6	6	6	36
French						2	2	2	2	8
Mathematics	3	3	3	2	4	4	4	3	2	28
Physics								1	2	3
History			2	2	2	2	2	3	3	16
Geography	2	2	2	2	2					10
Caligraphy	3	3	2	1						9
Total	23	23	24	25	26	26	26	26	26	227

Pupils admitted after completion of their ninth year. Gymnastics obligatory for all classes two hours per week. Drawing, singing, Hebrew, English, Italian, and stenography, optional.

Programme of the realgymnasia in Bavaria, August 2, 1880.

Subjects.	Latin-school classes.			Realgymnasial classes.						Total.
	1.	2.	3.	I.	II.	III.	IV.	V.	VI.	
Religion	2	2	2	2	2	2	2	2	2	18
German	6	3	3	2	2	2	2	3	3	26
Latin	7	10	10	8	8	6	6	6	5	66
French				4	4	3	3	3	3	20
English						4	3	3	3	13
Mathematics	3	3	3	3	5	7	6	6	6	42
Physics							2	2	2	6
Natural history				2	2					4
Chemistry and mineralogy								2	3	5
History			2	2	2	3	3	2	2	16
Geography	2	2	2	2	2					10
Calligraphy	3	3	2							8
Drawing				4	4	4	4	4	4	24
Total	23	23	24	29	31	31	31	32	32	258

Admission to the realgymnasium is conditioned on having completed the work of the three lower classes of the Latin school, the programme of which is therefore here repeated.

Gymnastics obligatory for all classes two hours a week; singing optional.

Programme of the real schools in Bavaria.

Subjects.	I (=V).	II (=IV).	III (=lower III).	IV (=upper III).	V (=lower II).	VI (=upper II).	Total.
Religion	2	2	2	2	2	2	12
German	6	6	4	4	3	3	26
French	6	6	5	5	3	3	23
English					5	5	10
Geography	2	2	2	2	1	1	10
History			2	2	2	2	8
Reckoning	5	4	4	2	1	1	17
Mathematics				6	6	4	16
Descriptive geometry						2	2
Natural history		3	3				6
Physics				2	2	2	6
Chemistry (mineralogy)					3	3	6
Calligraphy	3	2	2				7
Freehand and linear drawing	3	3	4	4	4	4	22
Total	27	28	28	29	32	32	176

Pupils admitted when they have completed, or are in, their tenth year.

Gymnastics obligatory two hours per week for all classes; singing elective.

Programme of the gymnasium in Stuttgart, Württemberg, with the changes introduced in the autumn of 1883.

Subjects.	I.	II (=Sexta).	III (=Quinia).	IV (=Quarta).	V (=Lower Tertia).	VI (=Upper Tertia).	VII (=Lower Secunda).	VIII (=Upper Secunda).	IX (=Lower Prima).	X (=Upper Prima).	Total.
Religion.....	3	3	3	2	2	2	2	2	2	2	23
German.....	5	4	3	1	2	2	2	2	2	2	26
Latin.....	12	12	12	11	11	12	8	8	8	8	102
Greek.....				6	6	6	6	6	6	6	42
French.....					3	3	3	3	3	3	16
History and geography.....		1	3	3	3	3	3	4	4	2	26
Mathematics.....	4	4	4	3	3	3	4½	4	4	3	36½
Natural history.....	1	1							2½	2½	7
Physics.....									1	1	2
Philosophy and propædæutics.....										2	2
Caligraphy.....	2	2	1	1	1						7
Total.....	27	27	26	28	31	31	28½	29	31½	30½	289½

Pupils admitted after completion of their eighth year.

Gymnastics obligatory in III and IV, two and a half hours per week; in V-X, two hours per week.

Singing obligatory one hour per week in II-V; singing society for the higher classes voluntary attendance.

Drawing elective in all classes; taught two hours weekly in classes IV-X.

The programmes of the other gymnasia in Württemberg are essentially like the above.

Programme of the realgymnasium in Stuttgart, Württemberg, with the changes introduced in the autumn of 1883.

Subjects.	I.	II (=Sexta).	III (=Quinta).	IV (=Quarta).	V (=Lower Tertia).	VI (=Upper Tertia).	VII (=Lower Secunda).	VIII (=Upper Secunda).	IX (=Lower Prima).	X (=Upper Prima).	Total.
Religion.....	3	2	2	2	2	1	1	1	1	1	16
German.....	4	4	3	1	1	1	1	2	2	2	22
Latin.....	12	12	12	11	10	10	4	4	5	5	91
French.....				6	5	4	3	3	3	2	28
English.....							3	3	3	3	11
History.....				2	2	2	2	2	2	1½	15½
Geography.....		1	3	1	1	3	2				9½
Philosophy.....										2	2
Mathematics.....	3	4	4	4	4	5	8	8	12½	9½	62
Physics.....									2	3-4	5-6
Chemistry.....								2	1		
Natural history.....	2	2	1	1	2	2				3-2	13-12
Drawing.....				3	3	4	4	5	3-2		24-23
Writing.....	2	2	2	1	1	1				2	9
Total.....	26	27	27	32	31	33	33	33	34-5	33-4	309-10

Pupils admitted after completion of their eighth year.

Gymnastics obligatory three hours per week in III-VII, two hours per week VIII-X.

Singing obligatory one hour per week in III-V.

Fencing elective one hour per week in VIII-X.

Programme of the realschools in Württemberg.

Subjects.	I.	II=VI.	III=V.	IV=IV.	Lower V=III.	Upper VI=III.	Lower VII=II.	VIII=upper II.	IX=lower I.	X=upper I.	Total.
Religion	3	3	3	3	2	2	2	2	1	1	.....
German	6	5	4	4	3	3	3	3	2	2	.....
French	8	8	9	7	6	6	5	5	4	3	.....
English .....	.....	.....	.....	.....	.....	3	3	3	2	2	.....
Philosophy and Propædæutics .....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....
History .....	.....	.....	2	2	1½	1½	2	1½	2	2	.....
Geography .....	.....	2	2	2	1½	1½	1½	1½	1	1	.....
Reckoning	6	6	6	5	4	4	1	4	.....	.....	.....
Arithmetic .....	.....	.....	.....	.....	.....	.....	4	4	.....	.....	.....
Analysis .....	.....	.....	.....	.....	.....	.....	.....	.....	3	4	.....
Geometry and stereometry .....	.....	.....	.....	.....	4	4	4	5	.....	.....	.....
Trigonometry .....	.....	.....	.....	.....	.....	.....	.....	1	3	1	.....
Analytical geometry .....	.....	.....	.....	.....	.....	.....	.....	.....	4	2	.....
Descriptive geometry .....	.....	.....	.....	.....	2	2	.....	2	4	4	.....
Physics and chemistry .....	.....	.....	.....	.....	.....	.....	2½	.....	3	3	.....
Natural history .....	.....	.....	.....	2	2	2	.....	2	.....	2	.....
Freehand drawing .....	.....	.....	.....	4	3	3	4	4	4	2	.....
Linear and architectural drawing .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
Writing	3	3	2	1	1	1	.....	.....	.....	.....	.....
Total	26	27	28	30	30	33	33	33	33	33	306

Pupils admitted after the completion of their eighth year; gymnastics and singing obligatory.

Programme of the gymnasia in the Kingdom of Saxony, according to the order of July 8, 1882.

Subjects.	VI.	V.	IV.	Lower III.	Upper III.	Lower II.	Upper II.	Lower I.	Upper I.	Total.
Religion	3	3	3	2	2	2	2	2	2	21
German	3	3	3	2	2	2	2	3	2	23
Latin	9	9	9	9	9	9	8	8	8	78
Greek .....	.....	.....	.....	7	7	7	7	6-7	6-7	40-42
French .....	.....	3	5	2	2	2	2	2	2	20
History	2	2	2	2	2	2	.....	.....	.....	18
Geography	2	2	2	1	2	1	3	3	3	13
Mathematics	3	3	4	4	4	4	4	4	4	34
Natural history	2	3	2	2	1	.....	.....	.....	.....	9
Physics .....	.....	.....	.....	.....	.....	1	2	2	2	7
Writing	2	1	.....	.....	.....	.....	.....	.....	.....	3
Drawing	2	2	.....	.....	.....	.....	.....	.....	.....	4
Total	28	30	30	31	31	30	30	30-31	30-31	270-272

Pupils admitted after completion of their ninth year. Gymnastics obligatory two hours per week in all classes. Singing obligatory two hours per week in VI-IV; one hour per week in III-I. English, Hebrew, stenography, and drawing in IV-I, elective.

Programme of the realschools of the first order (realgymnasias) in the Kingdom of Saxony, according to the order of January 29, 1877.

Subjects.	VI = V.	V = IV.	IV = Lower III.	III = Upper III.	Lower II.	Upper II.	Lower I.	Upper I.	Total.
Religion	3	3	3	2	2	2	2	2	19
German	3	4	4	4	4	3	3	3	31
Latin	3	5	4	4	4	3	3	3	34
French		6	7	4	4	3	3	4	31
English				4	3	3	4	4	18
Geography	2	2	2	2	2	2	2	2	16
History	2	2	2	2	2	2	2	2	16
Natural history	2	2	2	1	1	2	1	1	12
Physics				2	2	2	2	2	10
Chemistry				2	2	2	2	2	8
Mathematics	4	4	6	7	5	5	5	4	40
Descriptive geometry					1	2	2		7
Freehand drawings	2	2	2	2	2				10
Writing	2	2	1						5
Total	31	32	33	34	34	31	31	31	257

Pupils admitted after completion of their tenth year. Gymnastics and singing obligatory two hours per week, all classes. Stenography and freehand drawing in the three higher classes, elective.

Programme of the gymnasias in Baden with the changes introduced by the order of July 26, 1883.

Subjects.	VI.	V.	IV.	Lower III.	Upper III.	Lower II.	Upper II.	Lower I.	Upper I.	Total.
Religion	2	2	2	2	2	2	2	2	2	18
German	2	3	2	2	2	2	2	3	3	22
Latin	2	9	8	8	8	8	8	7	7	72
Greek			6	6	6	6	6	6	6	36
French			4	3	3	3	3	2	2	20
History			2	2	2	3	3	3	3	18
Geography	2	2	2	1	1					8
Mathematics	4	4	3	3	3			4	4	33
Natural sciences	2	2	2	2	2	2	2	2	2	18
Philosophy and propædæutics								1	1	2
Calligraphy	2	2								4
Drawing	2	2	2	2	2					10
Total	26	26	27	31	31	30	30	30	30	261

Pupils admitted after completion of their ninth year. Gymnastics obligatory two hours per week in all classes. Singing obligatory two hours per week in all classes except Tertia. English and Hebrew elective.

Programme of the realgymnasia in Baden with the changes introduced by the order of August 14, 1883.

Subjects.	VI.	V.	IV.	Lower III.	Upper III.	Lower II.	Upper II.	Lower I.	Upper I.	Total.
Religion	2	2	2	2	2	2	2	2	2	18
German	3	3	2	3	3	3	3	3	3	26
Latin	9	9	8	6	6	5	5	4	4	56
French			4	4	4	4	4	3	3	26
English				3	3	3	3	3	3	18
Geography	2	2	2	2	2	2	2	2	2	10
History			2	2	2	2	2	2	2	14
Arithmetic				2	2	3	3	3	3	16
Reckoning	4	4	3							11
Geometry, trigonometry				2	2	2	2	2	2	12
Descriptive geology						2	2	2	2	8
Physics						2	2	2	2	8
Chemistry								2	2	4
Natural history	2	2	2	2	2					10
Writing	2	2								4
Freehand drawing	2	2	2	2	2	2	2	2	2	13
Total	26	26	27	30	30	30	30	30	30	259

Pupils admitted after the completion of their ninth year. Gymnastics obligatory two hours per week in all classes. Singing obligatory two hours per week in all classes except Tertia.

Programme of the six-class Buergerschools in Baden.

Subjects.	I (= V).	II (= IV).	III (= lower III).	IV (= upper IV).	V (= lower II).	VI (= upper II).	Total.
Religion	2	2	2	2	2	2	12
German	6	5	4	4	4	4	27
French	7	7	6	6	6	6	38
English			3	3	3	4	14
Geography	2	2	2	2	1		9
History			2	2	2	2	8
Arithmetic	4	4	3	3	3	3	20
Geometry and trigonometry			2	2	2	2	10
Descriptive geometry					2	2	4
Natural history	2	2	2	2			8
Physics					2	3	7
Chemistry					2	2	4
Calligraphy	3	2	2	1			8
Drawing	2	2	2	2	2	2	12
Total	28	28	30	31	22	32	181

Pupils admitted after completion of their tenth year. Gymnastics and singing obligatory in all classes 2 hours per week.

THE FINAL RESULT.

The February number (1892) of the London Journal of Education contains the following editorial article, which states the results of the deliberations of the special committee, mentioned on p. 389:

The new time table for Gymnasien in Prussia, which comes into force next Easter (1892), may be regarded as a compromise between the advocates and opponents of classical teaching. It reduces the hours assigned to instruction in Latin by 20 per cent, while the reduction in Greek amounts to 10 per cent only. The difference is

due, not to any preference for Greek, but to the belief that a much greater reduction would render the teaching of the Greek language practically ineffective. The voices raised in favor of Greek instead of Latin as the basis of school instruction are few and far between. Latin has been the primary school subject in Germany for a thousand years. It has at all periods exercised a powerful influence on German literature, and its disappearance would leave a great gap in the educational system. Just at this moment nothing could take its place in higher education. No subject has been so carefully adapted, by long molding and remolding, for the general purpose of mental discipline and as an introduction to the study of language. The student of modern languages at the university would be helpless without this preliminary training. The establishment of secondary schools without Latin so far does not contradict this view.

Now, Greek is really an intruder into the school programme. It was indeed taught, but not as a compulsory subject, before the beginning of this century. It was in 1812 that Greek was first made obligatory for students proceeding to the university, and it took its place thenceforward as a necessary part of school instruction.

It is noteworthy that the giants of Greek scholarship grew up under a system of noncompulsion, Heyne, Wolf, Lachmann, Böckh, Bekker, Hermann, and that the great impulse which Greek communicated to German literature under Goethe and Schiller was also earlier in point of time. The objections to the study of Greek from a practical point of view may be thus summed up:

(1) Pupils are detained too long at the gymnasium. The average age of graduates is 19½ to 20. They remain on in order to pass the necessary examination to qualify for the university. Very few of these intend to study classics at the university. It may fairly be said that Greek entails two additional years at school.

(2) Attention is diverted from the subjects which are of practical importance, or health suffers under the effort to carry on all subjects alike.

(3) A preponderant amount of time is necessarily given to the study of dry grammatical details, disgusting to the pupil, and taking away his attention from the study of the literature. Nor is the success such as to justify this expenditure of time and labor. (In fact, complaints are general that the real mastery over grammatical forms, which is attained in Latin teaching, is never attained in Greek. These complaints are likely to be louder under the new time table.)

Some practical teachers, who wish to retain Greek in schools, have strongly advocated the inductive method. This is a variation on the well-known plan by which the translation of a portion of some author is first mastered, and grammatical instruction is given as required. This system was advocated by Herbart, introduced by him in Göttingen, and carried out under Ahrens in Hanover. Gehl-Rath Dr. Lattmann, author of the excellent Latin grammar, gives an interesting account of Herbart's method in a pamphlet on this method of teaching, which he strongly advocates. Some countenance is given to it in the new time table.

Other teachers advocate the free use of "Versionen," *i. e.*, "cribs." A more thorough-going proposal is to give up the study of the language altogether, and to devote two hours weekly to an organized study of Greek authors in translations (Prof. Bahusch). We may add that in schools the writing of Greek prose and verse is a thing of the past; only very simple exercises survive for grammatical practice.

For the moment such radical proposals as the last mentioned are out of court. We must wait for the working of the new time table, and when the results attained are weighed and estimated, it will be time to take further steps. Meantime these ideas, which outstrip the general current of opinion in influential circles, serve to show the set of the stream.

Now, it must be remembered that one and the same authority determines what shall be taught in school and university. If a change in the school plan is determined, it can at once be extended to the university.

In direct connection with the university are schools of three classes: (1) Wholly classical—Gymnasien—with Latin and Greek; (2) Realgymnasien, with Latin; (3) Oberrealschulen without Latin.

Those who have passed the final examination (*Maturitäts Examen*) at gymnasien are free to study in any of the four faculties at the university: theology, law, medicine, philosophy.

Those who pass from realgymnasien are admitted to study in the philosophical faculty, but are excluded from the faculties of theology, law, and medicine.

By the new regulations issued in December, 1891, to come into force after Easter, 1892, the certificate of graduation from the Oberrealschule admits the holder to study mathematics and natural science at the university. And he is further entitled "to present himself for examination as a candidate for the post of teacher at higher schools." Thus the last classical barrier is completely removed, and entrance to the university is free to all who can show that they have attained a high intellectual standard.

It will have been seen that the conditions of entrance depend on the status of the school from which the student proceeds. Greek and Latin are absolutely exacted from the pupil of the gymnasium, and Latin from one at the realgymnasium. It is only those who proceed from the Oberrealschule who are exempt from both.

The struggle has gone on for a long time. The majority in the universities in 1869 opposed the concession to the realgymnasium; but public opinion backed the government in granting the privilege. The agitation for greater freedom is still active. It may be said that all parties are unanimous in favor of requiring Greek for students of theology and classical philology. As to the faculties of medicine and law, opinions are divided. Perhaps those in favor of retaining Greek for jurists are more numerous than those who would lay the burden on medical students. But popular opinion, and a large body of professional men also, would set both free.

Considerable regret is felt among teachers at the admission of students without knowledge of Latin to the universities, and consequently to the ranks of a profession which prides itself on its intellectual standard. Latin, of course, symbolizes a certain grade of culture.

But the change was inevitable. The reply to objectors is based on a broad principle. The universities belong to the nation. All who have attained a sufficient intellectual training have a right to enjoy the benefits to be derived from a prolongation of their studies. Nor would it be right to exclude an able teacher from the higher walks of his profession because he may not have one particular taste in common with his colleagues.

In this, as in all walks of life, exceptional talent will prove its own justification. It is, perhaps, a little remarkable to find the Government more liberal in tone than the universities; that is, taking a wider view of national requirements—and it must be added, taking a juster view of what is meant by intellectual culture. It is well known, too, that the government is so far from lowering the intellectual standard that the state examinations are severe and exacting. True intellectual culture is best promoted by a wise latitude. Nothing is more to be deprecated than the exaction of a mere pass qualification. It diverts the attention from serious study, and proves a source of infinite vexation and disgust. Nor is it just, nor in the long run possible, for a majority of the community to impose on the minority its own views of what may or may not be necessary for intellectual salvation.

Old "time table."

Subjects.	VI.	V.	IV.	III B.	III A.	II B.	II A.	I B.	I A.	Total.
1. Religious instruction...	3	2	2	2	2	2	2	2	2	19
2. German	3	2	2	2	2	2	2	3	3	21
3. Latin	9	9	9	9	9	8	8	8	8	77
4. Greek				7	7	7	7	6	6	40
5. French		4	5	2	2	2	2	2	2	21
6. History										
7. Geography	3	3	4	3	3	3	3	3	3	28
8. Mathematics	4	4	4	3	3	4	4	4	4	34
9. Natural history	2	2	2	2	2					10
10. Physics						2	2	2	2	8
Total	24	26	28	30	30	30	30	30	30	258

The new plan comes into force at Easter, 1892. The old plan dates from 31st March, 1882.

New "time table."

Subjects.	VI.	V.	IV.	III B.	III A.	II B.	II A.	I B.	I A.	Total.
1. Religious instruction...	3	2	2	2	2	2	2	2	2	19
2. German	4	3	3	2	2	3	3	3	3	26
3. Latin	8	8	7	7	7	7	6	6	6	62
4. Greek				6	6	6	6	6	6	36
5. French			4	3	3	3	2	2	2	19
6. English							2	2	2	6
7. History				2	2	2				
8. Geography	2	2	2	1	1	1	3	3	3	26
9. Mathematics	4	4	4	3	3	4	4	4	4	34
10. Natural history	2	2	2	2						8
11. Physics					2	2	2	2	2	10
Total	23	21	26	28	23	30	30	30	30	246

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And in addition a considerable number of school catalogues, programmes, pamphlets, etc.

CHAPTER XI.

EDUCATION IN AUSTRIA-HUNGARY IN 1889-90.¹

I.—IN AUSTRIA.

SOURCES OF INFORMATION.

- (1) "Pädagogisches Jahrbuch für, 1889."
- (2) "Die Oesterreichischen Volksschulgesetze," by Ritter v. Obentraut.
- (3) "Statistik der Unterrichtsanstalten," Band 25, Heft 3 der Oesterr. Statistik.
- (4) "Das Neue Reichs-Volksschulgesetz, May 14, 1869."
- (5) "Die Volksschule Oesterreichs von Einst an Jetzt."

1.—HISTORICAL REVIEW.

There was a time in Austria when the simplest conditions of education, such as we deem absolutely necessary in modern times, were the exclusive privilege of the so-called "higher" or "better" classes of society. The classes were separated by barriers which could be scaled only by specially gifted men, and by them rarely with impunity. The clergy was the only class in which aristocracy of birth, wealth, and talent mingled, leaving, however, the aristocracy of birth in the supremacy.

The people's school (public elementary school) is an institution of modern time. Equal rights for all under the law is the principle which led inevitably to the establishment of public schools. The Middle Ages had no room for it; during the centuries which saw the great church reformation, the thirty years' war and its frightful results, the people had neither means nor inclination to carry on the war with ignorance and social injustice. At that time, and later on, Austria had universities, Latin schools, aristocratic academies or private institutions for the wealthy, some city and a few convent schools, the trivial or German schools (so called in contradistinction to Latin schools); but the general Austrian public elementary school (people's school), as an institution of rudimentary learning for privileged and nonprivileged classes for rich and poor, subject to the state's supervision, following a prescribed course of study, that school is a creation of the Maria-Theresian era. Joseph II, son of Maria-Theresa, whose intentions for improvement were very sincere, died too young to complete the work his mother had begun, and the subsequent efforts of Austria in its struggle with Napoleon

¹Prepared by Dr. L. R. KLEMM, specialist in foreign school systems.

I, prevented active promotion of popular education. During the "quiet years" from 1815 till 1848, the public school did not seem to make much progress, since it was at the tender mercy of the lords of the soil and the clergy, who thought that educating the masses would emancipate them unduly.

The year 1848, which saw the people's uprising, brought, at last, that which a Prussian king had given to his people from a sense of self-preservation after the defeat of his armies in 1806. Extinction of feudal privileges held by the aristocratic lords, liberation of the small landowners from intolerable burdens of taxation, formation of home rule in communities (township government), and a constitution for the empire—these were, in the main, the results of the year 1848. The author of the first bill for public education in 1848, Under-States'-Secretary E. v. Feuchtersleben, whose book on "Dietetics of the Soul" became very popular, was not an educator, but he had great enthusiasm for education and high ideas. Subsequent attempts at framing a school law took this draft as a model.

In 1849 a separate department of education was created and Count Leo Thun was the first Austrian minister of public instruction. At this time M. A. Becker was made general superintendent of the schools of Lower Austria. Vernaleken was called from Switzerland to aid the minister, and Krombholz became chief of the section of elementary schools. The activity of these men was directed towards improving the profession of teaching, but leaving the teachers to choose their own methods; they called the teachers together to meetings for the discussion of professional topics in order to raise their professional education; prolonged the normal-school course from one to two years; furnished the profession with a suitable book of methods, and in every way provided the schools with their most important feature, namely, teachers. The minister also planned to have an approved set of textbooks prepared. Experienced schoolmen were sent to Switzerland and progressive states of Germany to investigate the conditions of public education in those countries, and on their return to propose improvements. All these things were undertaken and only needed time to ripen into beneficent action, when, alas, the conservative cabinet, with Schwarzenberg as chancellor, checked the work in progress. The constitution granted by the Emperor in 1848 was withdrawn and the influence of the conservative party became more powerful than ever. In consequence of the "Concordat" (agreement) entered into with the Pope on August, 1885, the elementary school of Austria was again placed under clerical supervision. The course of study in preparatory classes of normal schools was shortened; natural history, physics, mechanics, geometry, and architectural drawing were omitted entirely, geography and history confined to mere knowledge of the native country and its history. In 1853 the topics to be discussed in teachers' meetings were limited to those that concerned the interests of the

schools of the respective districts. In 1854 Austrian teachers were prohibited from attending meetings of the "National German Teachers' Association." A decree of 1856 forbade the teachers to teach "other knowledge, or in any other manner, or to a greater extent, than was suggested in the prescribed text-book." Even arithmetic was restricted to the four fundamental rules and their application in practice.

Notwithstanding all these restrictions, which would seem to us intolerable, the impetus which the schools and their teachers had received through the eventful years 1848 and 1849 could not be entirely overcome. The ideas expressed in the memorable National Parliament at Frankfort (German Austria was part of Germany till 1866) and the press acted like leaven, and secretly the teachers and local influence upheld the ideals formed, so that when more than thirteen years later a change in the government took place which made rapid progress possible the Austrian public elementary school took an upward start which occasioned great surprise.

In 1861 the Emperor granted the people a new constitution, and with it factors came into activity which quickened the educational life of Austria. Nevertheless it took more than eight years before great memorable improvements were undertaken. No agency worked harder or more to the purpose than the city government of the capital, Vienna. The city council demanded from the Government a separation of the management of schools from political affairs, a system of well-organized normal schools, and as a postulate of local government local management or supervision of the schools. At the same time Vienna began to reform its own schools. In March, 1862, gymnastics were introduced, the teachers' salaries increased, better qualification of teachers demanded from the Government, new school buildings erected, and all the existing city schools provided with objects for the successful teaching of elementary science and natural history. The city council appointed a commission and charged them with supervision of the schools and their reorganization. This committee has become a permanent branch of the city government.

During this period the teachers aided all attempts at reform and gave expression to their wishes and opinions. It may be said that the Austrian educational press had its beginning in 1861 and 1862. The first teachers' association of any note dates from that time, and many Austrian teachers took part in the great memorable meetings of the "National German Teachers' Association" in Gera (1862) and in Mannheim (1863). They brought home glowing descriptions of the flourishing schools in Germany, and thus incited their Austrian brethren to greater efforts. In monster petitions to the Government they set forth these ideals and taxed themselves to establish private courses of scientific and professional study.

The Government could not remain deaf to the general desire, and conferred with the teachers in Vienna and other parts of the country.

An immediate result of this was an attempt at promoting the normal training of the teachers. The minister of education decreased the number of candidates for admission to normal schools, increased the course of study, and prescribed more vigorous examinations for teachers' diplomas. In 1866 a commission was appointed for the purpose of revising and improving the text-books used in elementary schools. At every step taken the teachers were consulted, and rarely was anything done contrary to their wishes.

Vienna was first to press forward. The city authorities petitioned Parliament to reorganize the normal schools and thus make improvement in the schools possible. In February, 1864, the city authorities resolved to establish several advanced elementary city schools (*Bürger-schulen*), and the year 1866 saw the completion of a system of schools similar to the French superior primary schools. In order to secure well-equipped teachers for these higher schools a new superior normal school was established under the name of "*Pädagogium*," the students of which had to be teachers in active service and graduates of common normal schools. Dr. Fr. Dittes, school councilor in Gotha, was called to preside over this school. Meanwhile the teachers all over the country, aware of the fact that the schools were not up to the standard, passed resolutions to that effect and petitioned provincial and state authorities in a manner that found attention in Parliament. Then came the disastrous year of 1866, in which the Austrian army was so signally defeated within six weeks by the well-trained and educated army of Prussia.

Among the memorable changes that reconstructed the entire Empire upon a more modern basis were several decrees (May 25, 1868), forerunners of a law which did away with church supervision and placed in its stead local, district, and provincial school boards. With the exception of religion the teachers were made independent of church influence in all their instruction. The school was separated from the church, with which it had been in close connection, and the "*Concordat*" with Rome was rescinded. On May 14, 1869, the present school law which defined the course of study was passed. This law is essentially the same as that which is now in force. Under it the schools of Austria have progressed more than was hoped or expected by even the greatest optimists. What generations had neglected was done in two decades. The number of pupils increased astonishingly; many new schoolhouses had to be built. In order to show in a single item the progress made we may instance Vienna: In the year 1869 the number of pupils in the lower schools was only 35,000. Ten years later it had risen to 61,000. The expenditures in 1869 rose from 400,000 florins, or \$142,800, to 2,500,000 florins, or \$892,500, within ten years. To this should be added the sacrifice which many poor parents had now to undergo since their children were retained in school two years longer than formerly. The financial depression occurring during the seventh

decade had its influence also upon the progress of the schools, otherwise it would have been still greater.

The Liberal cabinet resigned in 1877 and was replaced by members of the Conservative party. This party favored autonomy of all the different nationalities represented in Austria. Thus the Bohemians, Hungarians, Poles, and others clamored for home rule, and the effect this political war had upon the school was anything but beneficial. Several attempts were made at modifying the school law, but the Imperial Government protected it from assaults and allowed the schools to progress without troublesome interference. In many respects the institutions created by the law of 1869 are similar to the schools in Prussia. It is interesting to know that the public school has from the day of the passage of this law been called the "new school" (*Neuschule*), a term which crept into the German and Swiss educational press, and shortly afterwards was used in this country in a modified form as "new education."

The principle of local management of the schools is maintained by the law of 1869. There are three ascending authorities—local (*Orts*), county (*Bezirks*), and provincial (*Landes*) school boards—which may be likened unto three sieves. The local board has the largest interstices. City or village councils and school boards are largely made up of the same men; they hold their office without pay, and particularly dislike the work of enforcing the compulsory attendance act; hence the fact that, notwithstanding vigorous execution of the law, 11 per cent of the children of school age escape enrollment. In cities, as a rule, a better class of men are found on the school boards. Social rank and education determine their selection to a great extent. But even in cities the machinery of government does not work as smoothly as is desirable. The three governmental boards—board of aldermen, city council, and school board—are often antagonistic to one another, and appeals to higher authority are frequent. The county board (or *Bezirksschulrath*) may be considered as being between the upper and nether millstone. It has to refute assumption on the part of the state's authority, and coerce lower boards into action where inaction is more to the liking of the people. This county board, the members of which are all school officers or inspectors (*Bezirks Inspektoren*), performs the duties of supervision. Local supervision is nowhere found in Austria except in cities, where the schools are so numerous that they themselves resemble a county system. To these difficulties in managing the schools, which are perhaps experienced in other countries also, are added those arising from the heterogeneity of the population in Austria. Often several languages are spoken in one and the same county, town, or village, and each nationality claims representation in school. That principle of the American common school which makes it the most effective agency of homogeneity, namely, the principle of teaching *one* language, and *one* only, is not accepted in Austria, where the Slavic and Teutonic elements are constantly at war with each other.

2.—PRESENT CONDITION OF THE PUBLIC SCHOOLS IN AUSTRIA.

It is impossible to sketch the various features of public education in Austria within the short space of a report; mere outlines must suffice. The guiding idea for school legislation has been given in the constitution as adopted and amended December 21, 1867, and May 25, 1868. Article 17 of the constitution says concerning the rights of citizens exactly what the Prussian constitution expresses, to wit: "Science and the teaching of science are free;" that is to say, free from one-sided confessional and political considerations, bound only by the eternal laws of truth and morality. These words have not only secured liberty of action to the professors in the university for the widest range of scientific investigation, but have equally benefited the institution that is destined to feed the juvenile mind with mere elements of human knowledge, the "people's school." This was a great step forward from the standpoint taken by Empress Maria Theresa and Emperor Joseph II. The school, which originally had been a church institution and was by the great Empress regarded as a "politicum" (a political question) and placed under the care of the state, without, however, removing church influence, was now made independent. The entire school system in all its parts became a secular matter in 1867, and the state reserved the right of supervision, even that of instruction in religion. Religious instruction, it is true, was not taken out of the hands of the clergy and put into the hands of the secular teachers, as was done in Prussia, but it remained in the hands of the clergy, except that now the law made the teachers of religion officers of the state as well as their secular colleagues, and subject to the law.

The business of teaching is not restricted to any profession or confession. Every citizen who has proven his ability according to law—*i. e.*, has passed certain state examinations—may teach in public schools or establish a school himself. Private education at home is not subjected to the law, as it is in Prussia. While thus the state reserves for itself the supreme supervision of all public schools, it grants a certain liberty for the development of the individual.

Article 19 of the constitution regulates the relation between the different nationalities according to the principle of free development. It says: "All nationalities in the state have equal rights, and each has the inalienable right to secure and maintain its language." A consequence of this is equality before the law, in courts, in administrative offices, and in schools of all the many languages found in Austria—German, Polish, Slavonian, Servian, Bohemian, Ruthenian, Italian, Roumanian, and Hungarian. They are all regarded national languages, as German, French, and Italian are in Switzerland. From this state of affairs arise difficulties for the elementary and secondary schools which are not found in our country, nor in Germany, France, or England. Many an apparent abnormality found in the Austrian schools (and like-

wise in the Hungarian, where similar conditions for a long time prevailed) may be explained by this constitutional provision, which was dictated by pure humanity.

The law of May 25, 1868, not only regulates the relations between school and church according to article 17 of the constitution, but it also defines the duties of the different authorities. The state exercises direction and supreme supervision over the entire system of public instruction, through its agent, the minister of instruction. Below him stand next in rank the state superintendents (*Landes Schulräthe*) appointed by the governors of the different states (provinces or crown-lands). Next in rank below are the county school boards (*Bezirks-Schulräthe*) selected from the ranks of professional teachers in elementary and secondary schools. The lowest position in the administration is occupied by the local school boards.

The church authorities were allowed to continue their supervision of the religious instruction, but it was soon found that the dissatisfaction of the clerical party had to be met by allowing the church to establish parochial schools. These confessional schools (as they are called) are regarded as state schools as soon as they comply with the requirements of the law that prescribes the course of study and professional preparation of teachers. Text-books for religious instruction are to be approved by the church.

The right to teach is not restricted to any confession or religion; neither is the child of any citizen debarred from attending the school of the district in which he resides, regardless whether the child belongs to the Roman Catholic, Greek Catholic, Protestant, Reformed Evangelical, Unitarian, or Jewish faith. In other words, the schools of Austria are common schools, so far as religion is concerned.

There are slight differences in the election, confirmation, and duties of the various supervisory and directive authorities, since the local affairs of the school in each crown land (state or province) are managed according to local legislation, but the law of 1869 fixed the principles according to which the schools of the Empire are to be governed, so that whatever differences occur are only of local importance, just as the individuality of our schools and States is guarded by leaving school legislation to the separate States.

In the following pages the present condition of the different grades of schools as expressed in statistics is given. There are some curious things to be found in these statistics that will be interesting to American readers.

One thing the reader will miss, a statement of expenditures. No reports on that point are available, notwithstanding the repeated efforts on the part of this Bureau to obtain them. The only definite statement procured is the amount the state pays (during 1891-92) for all school purposes, that is, elementary and secondary schools, universities and polytechnica, and for special and art instruction, namely,

\$8,307,774. It is interesting to compare this sum with the state appropriations of Hungary and Prussia.

Country.	Inhabitants.	Year.	State appropriation for public education. <i>a</i>
Austria	23,895,833	1889	\$8,307,774
Hungary	17,180,971	1889	3,643,762
Prussia	29,958,388	1890	21,561,319

a 1831-92.

3.—MEMORABLE DATES IN THE HISTORY OF THE AUSTRIAN SCHOOLS.

- 1774. Maria Theresa's school regulations and expulsion of the Jesuits.
- 1781. Joseph II, edict of tolerance.
- 1805. Political constitution of the Austrian public school.
- 1848. First draft of a school law for elementary schools.
- 1849. Law regulating secondary and superior education passed.
- 1849. Establishment of a department of public instruction.
- 1861. Second attempt at framing a school law for elementary schools.
- 1866. Separation of Austria and Germany.
- 1867. New constitution for Austria.
- 1868. School law for elementary schools passed, defining the rights of church and state. "
- 1869. School law defining course of study.
- 1869-1873. Separate state laws passed in the legislatures of the separate crown-lands.
- 1877. Essential amendments to school law of 1869.
- 1883. Regulations issued by the minister of public instruction for guidance of teachers and school officials.

4.—ELEMENTARY EDUCATION.

In Austria, that is, in Cisleithania, or the Western part of Austria-Hungary, elementary education is offered in 17,276 public and 965 private schools. No statistics concerning the latter, but minute accounts of the public schools are published by the Austrian "Statistische Central Commission," from which the following statements are taken:

Grading.—The public superior elementary schools in some cities are called "Bürgerschulen" (citizens' schools), of which there were 425 in 1889; the other public elementary schools are called "Volksschulen" (people's schools), of which there were 16,851 in the same year. The distinction between citizens' and people's schools is very slight, and the citizen's schools of Austria must be well distinguished from the citizen's school in Prussia, where they are justly classed among the secondary schools. Of the people's schools in Austria, 50.2 per cent were ungraded; 23.6 per cent had two grades or classes; 10.3 per cent had three grades or classes; 6.3 per cent had four grades or classes; 8 per cent had five grades or classes; 1.3 per cent had six grades or classes; 0.2 per cent had seven grades or classes; 0.1 per cent had eight grades or classes.

Half-day schools.—Of 17,276 public elementary schools, 12,683 were

kept open all day; 2,353 were half-day schools, while in 1,240 schools instruction was given partly half a day, partly the entire day; that is to say, some of the lower grades were so crowded that they had to be divided into half-day schools, while the upper grades had instruction all day: 73.4 per cent were whole-day schools; 19.4 per cent were half-day schools; 7.2 per cent were partly whole, partly half-day schools.

Coeducation.—Of the 17,276 elementary schools, 1,388 (8.03 per cent) were exclusively boys' schools, 1,087 (6.3 per cent) exclusively girls' schools, and 14,801 were mixed (85.66 per cent).

Medium of instruction.—The following table is instructive, in so far as it shows that in the greatest number of private schools German was the medium of instruction; in other words, that the German-speaking population maintains the greatest number of private schools, owing to the encroachments of the Slavic races upon the German, which the "German School Union" tries to counteract by establishing and maintaining private German schools. The language of instruction was—

	In public schools.	In private schools.	In general.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
German	41.1	65.7	42.4
Bohemian	25.5	13.0	24.8
Polish	9.6	11.5	9.6
Ruthenian	10.7	0.3	10.2
Slavonian	3.3	1.0	3.2
Italian	4.9	4.4	4.9
Servian	1.8	1.0	1.8
Roumanian	0.5	0.1	0.5
Hungarian	0.0	0.1	0.0
Mixed	2.6	2.9	2.6

Teachers.—In 1889, Austria had 60,126 teachers in the public elementary schools, 45,705 (or 76 per cent) men, and 14,421 (or 24 per cent) women. Among the 45,705 men were 13,875 teachers of religion, 364 of whom were appointed by school and 13,511 by church authorities. Among the 14,421 women 6,930 taught only knitting, sewing, embroidery, crocheting, etc., to the girls twice a week. If we deduct the teachers of religion and those of female handiwork, we find the actual number of school teachers to have been 31,830 (81 per cent) men and 7,491 (19 per cent) women, a total of 39,321.

Qualification of teachers.—During the year 1889 the teachers of the public elementary schools were not all properly qualified, but the proportion of those professionally prepared is gradually, though slowly, increasing.

Compare these columns:

Teachers.	1887.		1888.		1889.	
	Men.	Women.	Men.	Women.	Men.	Women.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Graduates of normal schools	82.8	75.2	83.7	74.0	84.6	75.0
Holding local diploma	12.2	18.3	11.0	17.0	10.1	16.8
Not certificated	5.0	6.5	5.3	9.0	5.3	8.2

Salaries of teachers.—The salaries paid to elementary teachers in Austria are lower than those of similar grades of teachers in our country, and also lower than those paid in Germany and France. While in large cities, such as Vienna, the teachers enjoy comparatively good incomes, in far remote crown lands, like Tyrol, Bukowina, etc., they live in great want and poverty. Advertisements by local boards in Tyrol are published not unfrequently, calling for teachers at salaries of \$70 to \$80 per annum, and even less for women. The city of Vienna has recently adopted a new schedule of salaries for the teachers of the middle and elementary schools, which is here reproduced to afford a standard of comparison with salaries paid in other capitals. In the following table four salaries are stated for each class of teachers, a first and a second grade of the new schedule, and a first and a second grade of the old schedule.

(1) FOR MALE PRINCIPALS OF CITIZENS' SCHOOLS.

Grade of salary.	Minimum salary.	Annual in lieu of rent.	Six advances at intervals of 5 years.	Without advances.	Total salary.	
					With one advance.	With six advances.
I (new)	\$545.50	\$178.50	\$35.70	.....	.....	\$928.20
II (new)	499.80	178.50	35.70	.....	.....	892.50
I (old) .....	.....	.....	.....	.....	.....	856.80
II (old) .....	.....	.....	.....	.....	.....	499.80

(2) FOR FEMALE PRINCIPALS OF CITIZENS' SCHOOLS.

I (new)	\$464.10	\$142.80	\$35.70	.....	.....	\$821.10
II (new)	428.40	142.80	35.70	.....	.....	785.40
I (old) .....	.....	.....	.....	.....	.....	756.12
II (old) .....	.....	.....	.....	.....	.....	464.10

(3) FOR MALE TEACHERS IN CITIZENS' SCHOOLS.

I (new)	\$392.70	\$129.50	\$35.70	\$517.65	\$553.50	\$731.85
II (new)	357.00	129.50	35.70	481.95	517.65	696.15
I (old) .....	.....	.....	.....	417.69	489.10	700.43
II (old) .....	.....	.....	.....	321.30	339.15	428.40

(4) FOR FEMALE TEACHERS IN CITIZENS' SCHOOLS.

I (new)	\$392.70	\$117.10	\$35.70	\$499.80	\$545.50	\$714.00
II (new)	357.00	89.25	35.70	466.25	481.95	624.95
I (old) .....	.....	.....	.....	417.69	455.54	596.10
II (old) .....	.....	.....	.....	321.30	339.15	428.40

(5) FOR MALE TEACHERS OF PEOPLE'S SCHOOLS.

I (new)	\$321.30	\$117.10	\$35.70	\$428.40	\$464.10	\$642.60
II (new)	285.60	129.50	35.70	410.55	446.25	624.75
I (old) .....	.....	.....	.....	371.28	406.28	642.60
II (old) .....	.....	.....	.....	285.60	304.45	392.70

(6) FOR FEMALE TEACHERS OF PEOPLE'S SCHOOLS.

Grade of salary.	Minimum salary	Annual in lieu of rent.	Six advances at intervals of 5 years.	Without advances.	Total salary.	
					With one advance.	With six advances.
I (new).....	\$321.30	\$89.25	\$35.70	\$410.55	\$446.25	\$624.75
II (new).....	285.60	89.25	35.70	374.85	410.55	589.05
I (old).....				371.28	389.13	559.78
II (old).....				285.60	303.45	392.70

(7) FOR MALE ASSISTANTS WITHOUT NORMAL SCHOOL TRAINING.

I (new).....	\$249.90	\$42.84	\$35.70	\$292.74	} Assistants are only temporarily employed.
II (new).....	214.20	42.84	35.70	257.04	
I (old).....				246.33	
II (old).....				214.20	

(8) FOR FEMALE ASSISTANTS WITHOUT NORMAL SCHOOL TRAINING.

I (new).....	\$249.90	\$32.13	\$35.70	\$282.03	} Assistants are only temporarily employed.
II (new).....	214.20	32.13	35.70	246.33	
I (old).....				246.33	
II (old).....				214.20	

NOTES.—If a teacher is required to work extra hours, he receives an addition to his salary of \$14-\$15 per year for each additional hour per day.

The fractions of dollars are caused by changing Austrian florins into American dollars: 1 florin = .357.

Number of pupils per teacher.—In 1889, the average number of pupils to the teacher was 72; if we count in the special teachers of religion and female handiwork the average number per teacher was 47.1. The corresponding numbers in 1887 were 73.3 and 48 respectively; in 1888, 72.4 and 47.6.

Enrollment.—While the census found 3,366,898 children in 1889 of school-going age, 2,831,667 (84.11 per cent) were enrolled in public elementary, 106,908 (3.18 per cent) in private elementary, 1,346 in asylums, 51,836 (1.54 per cent) in secondary or special schools, or were taught by private teachers, 22,048 (0.66 per cent) could not be enrolled owing to bodily or mental deficiencies, and 367,769 normally equipped children escaped enrollment=10.99 per cent. Comparing the number of pupils in school with the population, we find that of every 100 persons in Austria 14.1 are of school age (6 to 14 years), but only 11.9 are enrolled in school.

Compulsory education.—The execution of the compulsory-education law made 172,811 sentences necessary. Of these, 106,957 imposed fines, 14,487 imprisonment of one day or more, and 51,367 imprisonment of a few hours. The total amount of fines was (in 1889) 96,214 florins, or \$34,925. Among every 100 children who according to the law should have attended school 10.9 escaped enrollment (literally "were entirely withheld from school"), and in the case of 5.13 fines or imprisonment were imposed. While the fact that nearly 11 of every 100 children in Cis-

leithania escaped enrollment would seem to reflect upon one of the German-speaking nations, it must be remembered, however, that these deficiencies do not occur in the German, but chiefly in the Slavic crown lands, as is clearly seen from the following table:

Crown land or province.	Children withheld from school.	Crown land or province.	Children withheld from school.
	<i>Per cent.</i>		<i>Per cent.</i>
Nether Austria.....	0.06	Tyrol.....	0.21
Upper Austria.....	0.00	Bohemia.....	0.38
Salzburg.....	0.07	Moravia.....	0.37
Styria.....	2.80	Silesia.....	1.08
Carinthia.....	3.35	Galicia.....	39.03
Carniola.....	13.02	Bukowina.....	46.61
Coastlands.....	27.53	Dalmatia.....	16.60

Other items of interest.—In Austria (Cisleithania), 11,814 public schools offered physical training in form of gymnastics; 10,503 public schools offered industrial training of some sort, chiefly to girls; 9,407 public schools had school gardens for the study of botany and horticulture; 13,975 public schools had school libraries for pupils and teachers, while exclusively pedagogical libraries were maintained in 428 districts. The number of public kindergartens in Austria was 546, that of infant schools 486. Industrial continuation schools were maintained in 367 districts and agricultural continuation schools in 455 districts.

5.—SECONDARY EDUCATION.

Austria had, during the year 1888-89, altogether 252 institutions that can be classed under the head of institutions for secondary education; 173 were "Gymnasia" and "Realgymnasia," while 79 were "Realschulen." The character of these schools is adequately expressed by saying that Gymnasia are colleges or high schools in which classical studies predominate, Realschulen such in which modern languages and sciences predominate, while Realgymnasia are hybrid forms that try to accommodate students who cannot afford to follow either the classical or the modern course exclusively. Yet it is well understood in Europe that the Realgymnasia prepare students for the universities, while Realschule graduates were until recently debarred from entering higher seats of learning. The official report gives the statistics of the secondary schools under two heads, (a) Gymnasia (including Realgymnasia), and (b) Realschulen. We shall do the same in order to see what proportion of students follow classical and what proportion modern courses.

A.—If we group the Gymnasia and Realgymnasia according to the language of instruction, we find that in 98 schools (56.6 per cent) German is spoken; in 23 schools (13.5 per cent) Polish is spoken; in 3 schools (1.7 per cent) Servian is spoken; in 39 schools (22.5 per cent) Bohemian is spoken; in 1 school (0.6 per cent) Ruthenian is spoken; in 3 schools (1.8 per cent) Italian is spoken, while in 6 schools, or 3.5 per cent, two languages are spoken.

These secondary classical schools are maintained by different authorities as follows:

The state maintains 126 (or 72.8 per cent), the crown lands or provinces 9 (or 5.2 per cent), a number of cities 19 (or 11 per cent), the church 14 (or 8.1 per cent), and 5 (or 2.9 per cent) are private institutions or derive their maintenance from irreducible funds.

The number of professors and assistant professors engaged in these classical schools during 1888-89 was 3,473, namely:

Lower Austria	518	Tyrol	163
Upper Austria	78	Bohemia	1,088
Salzburg	40	Moravia	372
Styria	128	Silesia	103
Carinthia	49	Galicia	628
Carnolia	67	Bukowina	75
Coastland	99	Dalmatia	65

According to the language spoken by these 3,473 professors, they may be classified as follows:

Language spoken.	No. of professors.	Per cent.	Language spoken.	No. of professors.	Per cent.
German	1,852	53.4	Bohemian	855	24.6
Polish	535	15.4	Ruthenian	29	.8
Servian	45	1.3	Italian	93	2.7

Sixty-four (or 1.8 per cent) spoke two languages.

Students.—At the opening of the school year 1888-89 an increased number of applicants for admission were examined, namely, 11,532, of whom 1,089, or 9.4 per cent, failed to pass. The entire enrollment during that year was 55,846 students, or 46,113 in the Gymnasias and 9,733 in the Realgymnasias. The number of students enrolled during the last three years, for which official reports are at hand, was 53,148 in 1886-87, 52,665 in 1887-88, and 52,685 in 1888-89.

The following table may be of interest to American high-school teachers who would like to compare the condition of gradation in their schools with those of foreign countries.

In Austrian Gymnasias and Realgymnasias 20.5 per cent of the students sat in the lowest grade (11 years of age); 16.7 per cent in the second grade (12 years of age); 15.5 per cent in the third grade (13 years of age); 13.8 per cent in the fourth grade (14 years of age); 9.8 per cent in the fifth grade (15 years of age); 8.5 per cent in the sixth grade (16 years of age); 7.7 per cent in the seventh grade (17 years of age); 7.5 per cent in the eighth grade (18 years of age). The first four years (from 6 to 10 years of age) are spent in elementary and preparatory classes.

The foregoing refers only to Gymnasias and Realgymnasias. We shall presently see what proportion of the total enrollment of students in the Realschulen go through the entire course.

The following item confirms the often-heard statement that the Israelites send more children to secondary schools in proportion to their population than the Christians: Eighty-two per cent of the students in Gymnasia and Realgymnasia were Catholics, 1 per cent were Oriental Greeks, 2.6 per cent were Protestants, 14.2 per cent were Israelites, and other confessions were represented by 0.1 per cent.

That portion of the income of Gymnasia and Realgymnasia which was derived from tuition fees alone amounted to 956,344 florins, or \$341,414. Nearly one-half of all the students (47.4 per cent exactly) were freed from paying tuition fees. The number of students who drew stipends was 2,764 (or 5.2 per cent of the whole number). The amount paid in stipends or scholarships was 340,973 florins, or \$131,727.36, an average of \$47.68. Of course, the amount paid per student in the different crownlands (or provinces) varies considerably, while in Lower Austria it amounted to about \$60; in Silesia it was about \$24.

At the close of the year 1888-89, 4,109 senior students applied for admission to the final examination, but only 3,944 were admitted, of which only 3,536 or 89.8 per cent passed, 12.4 per cent of whom took the examination twice in the same year.

Of the 3,536 students who passed, 812 chose the study of theology, 1,021 chose the study of law and national economy, 799 chose the study of medicine and pharmacy, 221 chose the study of philosophy and philology, 74 chose technical studies, and 603 had not decided what study to take up.

B.—The number of Realschulen, or modern schools, in Austria during the school year 1888-89 was 79. Grouping them according to the language of instruction, we find that in 58 schools (73.4 per cent) German is spoken, in 5 schools (6.3 per cent) Polish is spoken, in 3 schools (3.8 per cent) Italian is spoken, in 12 schools (15.2 per cent) Bohemian is spoken, and in 1 school (1.3 per cent) Servian is spoken.

The Realschulen, or modern secondary schools, are maintained by different authorities, as follows: The state maintains 48 (or 60.8 per cent), the Crown lands (or provinces) 16 (or 20.2 per cent), the cities 9 (or 11.4 per cent), and 6 (or 7.6 per cent) are private institutions or derive their income from irreducible funds.

The number of professors and assistant professors engaged in these modern schools during 1888-89 was 1,371, namely:

Nether Austria	346	Tyrol	43
Upper Austria	33	Bohemia	350
Salzburg	17	Moravia	233
Styria	39	Silesia	75
Carinthia	15	Galicia	85
Carniola	19	Bukowina	28
Coastlands	65	Dalmatia	23

According to the mother tongues of these 1,371 professors, they may be classified as follows:

Language spoken.	No. of professors.	Per cent.	Language spoken.	No. of professors.	Per cent.
German	1,007	73.5	Bohemian	220	16.0
Polish	85	6.2	Servian	15	1.1
Italian	44	3.2			

Students.—At the opening of the school year 1888-89 an increased number of applicants for admission were examined—namely, 4,547—of which 412, or 9.1 per cent, failed to pass. The entire enrollment during that year was 18,679. A comparison of the number enrolled during the last three years reveals a steady increase.

	No. of students.
1886-87	18,277
1887-88	18,397
1888-89	18,679

The following table, if compared with a similar one on page 431, where the ratio of students in each grade of the classical schools is given, may show that the gradation in the Realschulen is more irregular, and that fewer students are found in the higher grades than in Gymnasias, where 7.5 per cent of all the students are seniors. In Austrian Realschulen 26.4 per cent of the students sat in the lowest grade (11 years of age); 22.4 per cent of the students sat in the second grade (12 years of age); 17.8 per cent of the students sat in the third grade (13 years of age); 14.6 per cent of the students sat in the fourth grade (14 years of age); 7.9 per cent of the students sat in the fifth grade (15 years of age); 6 per cent of the students sat in the sixth grade (16 years of age); 4.9 per cent of the students sat in the seventh grade (17 years of age).

If we further consider that the course of study is one year longer in Gymnasias than in these Realschulen, the difference in the falling off in the number of students of the two kinds of schools is very apparent.

The religions are represented in Realschulen almost exactly as in Gymnasias; 80.7 per cent of the students in Realschulen were Catholics, 0.4 per cent Oriental Greeks, 4.4 per cent were Protestants, 14.3 were Israelites; other confessions were represented by 0.2 per cent.

The amount of tuition fees paid by the students of Realschulen was 385,224 florins, or \$137,525. While in the classical schools 5.2 per cent of the students drew stipends, only 2.3 per cent of the students of modern schools enjoyed a like privilege. While in classical schools the amount of stipends was \$131,727.36, it was only \$14,728.75 in the modern schools, an average of \$37.20. Eight hundred and fifty-nine senior students applied for admission to the final examination; of these 790, or 90.8 per cent, passed.

6.—HIGHER EDUCATION.

Higher education in Austria (Cisleithania) is represented by 8 universities, 6 polytechnica, 1 agricultural college, 2 mining academies,

3 schools of fine arts, 43 theological seminaries, and 69 normal schools.

The 8 universities of Austria are those of Vienna, Gratz, Innsbruck, Prague (German), Prague (Bohemian), Lemberg, Cracow, and Czernowitz. The number of professors and assistant professors in all these 8 institutions was 1,112, of which 71 belonged to the theological, 148 to the law faculty, 422 to the medical, and 471 to the philosophical faculty. During 1889 the number of lectures given was 3,266; they were attended by 15,562 students during the winter semester, and by 14,274 during the summer semester. Of these Vienna had 6,371 students in winter, 5,448 in summer; Gratz had 1,385 students in winter, 1,311 in summer; Innsbruck had 890 students in winter, 873 in summer; Prague (German) had 1,643 students in winter, 1,535 in summer; Prague (Bohemian) had 2,537 students in winter, 2,500 in summer; Lemberg had 1,188 students in winter, 1,115 in summer; Cracow had 1,277 students in winter, 1,231 in summer; Czernowitz had 271 students in winter, 261 in summer.

During the winter semester only the medical faculty had an increase of students, namely, 282, while the others had a decrease of 88 students in all. During the summer semester the theological and law faculties had an increase of 19 each, the medical one of 110, and the philosophical a decrease of 41.

The students came from all parts of the Austro-Hungarian Empire, but 84.1 per cent were born in Cisleithania, 9.1 per cent in Transleithania, and 6.8 per cent in other countries. If the mother tongue of the students be considered, we find that the different nationalities are represented as follows: Germans, 43.8 per cent; Bohemians, 22.1 per cent; Poles, 15.4 per cent; Ruthenians, 3.6 per cent; Southern Slavs, 3.9 per cent; Italians, 3.2 per cent; Roumanians, 1.2 per cent; Magyars, 3.9 per cent; other nationalities, 2.9 per cent.

The religions were represented by 72.8 per cent Catholics, 2.9 per cent Oriental Greeks, 3.9 per cent Protestants, 19.9 per cent Jews, 1 per cent other confessions. The number of students who had the privilege of scholarships was 1,694 in winter and 1,741 in summer. The amount of stipends they drew was 547,773 florins, or \$198,841.60 (a florin = 35.7 cents), for the entire year (average \$116.66 for each student).

At the close of the year 5,435 students submitted to the final examination, namely, 113 students of theology, 1,821 of law, 2,524 of medicine, 238 of philosophy, and 739 of pharmacy. In theology 99.1 per cent passed, in law 85.5 per cent, in medicine 80.7 per cent, in philosophy 95.3 per cent., in pharmacy 83.2 per cent. The degree of doctor was conferred upon 1,226 candidates. The examinations for entering the service of the state were conducted in three sections: (1) legal and historical, for which 1,313 candidates applied and 1,065, or 81.1 per cent, passed; (2) judicial, for which 679 applied and 584, or 86 per cent, passed; (3) science of government, for which 621 applied and 545, or 87.8

per cent passed. The examination for diploma of teaching in secondary schools was passed by 207 out of 256 candidates, or 80.9 per cent.

The six polytechnica of Cisleithania had in 1888-89 together 348 professors and assistant professors. The number of "lectures and exercises" was 590 in winter and 566 in summer. The attendance at the institutions has decreased during recent years, as is seen from the following figures:

1885-86—Winter	2,026
Summer	1,823
1886-87—Winter	1,823
Summer	1,722
1887-88—Winter	1,813
Summer	1,643
1888-89—Winter	1,724
Summer	1,569

The chemical and technical departments have suffered a greater decrease than the general department, from which it may be inferred that the desire for general culture is greater than it was during the preceding decade, when civil engineers, chemists, machine builders, etc., were in special demand.

All parts of the Austro-Hungarian Empire were represented among the students: Cisleithania with 83.6 per cent; Transleithania with 8.9 per cent; 7.5 per cent were foreigners. These figures show very nearly the same proportion found in the number of students in the eight universities. But when comparing the numbers each nationality furnished, we notice some vital differences (compare p. 434): Germans, 52.1 per cent; Bohemians, 22.6 per cent; Poles, 12.5 per cent; Ruthenians, 0.6 per cent; Southern Slavs, 3.5 per cent; Italians, 2.5 per cent; Roumanians, 0.7 per cent; Magyars, 2.8 per cent; other nationalities, 2.7 per cent.

The religions were represented as follows: 73.9 per cent were Catholics, 3.7 per cent Oriental Greeks, 5 per cent Protestants, 17 per cent Jews, 0.4 per cent other confessions. Twenty-six per cent of the students enjoyed whole and 7.5 per cent half scholarships.

The agricultural college had 45 professors and assistants. This college also experienced a decrease in attendance in late years, which is seen from the following figures:

1885-86—Winter	309
Summer	259
1886-87—Winter	302
Summer	247
1887-88—Winter	281
Summer	224
1888-89—Winter	246
Summer	214

A cause for this decrease is not stated in the official Austrian report.

Cisleithania furnished 76 per cent, Transleithania 18.7 per cent, and foreign countries 5.3 per cent of the students. In regard to the mother tongue substantially the same ratios are found as in the universities

and polytechnica. The graduation examination in the polytechnica and the agricultural college was passed by 97.2 per cent of the candidates.

The two mining academies had 27 professors. Like the aforementioned institutions, these schools have a decreased attendance, as is seen from these figures:

1885-86	141
1886-87	122
1887-88	117
1888-89	97

The three schools of fine arts in Vienna, Prague, and Cracow had 43 professors. The following figures show the number of students in these three schools during the last four years:

1885-86	375
1886-87	365
1887-88	365
1888-89	433

The 43 theological seminaries consisted of 39 Catholic and 4 institutions of other confessions. Altogether they had 244 professors and 2,376 students.

The cost of higher education is nowhere stated in the official reports of Austria, and special inquiries on the part of this Bureau have remained unanswered, hence it is impossible to make a definite statement such as is made for other countries. All that can be said definitely is that in Austria (Cisleithania) the state spent, through the medium of the minister of education, \$8,307,774.49 in the year 1891 for all kinds of educational institutions. What proportion of this sum total is applied to higher, to secondary, and to elementary education cannot be stated.

In 1889 Austria had 69 normal schools, 42 for men and 27 for women. The language of instruction was German in 39, Bohemian in 12, Polish in 6, Italian in 2, Servian in 2 institutions, and in 8 of them several languages were used.

These 69 normal schools had 972 teachers and 9,415 students. There is, however, a distinction to be made between normal schools for elementary teachers and those for industrial teachers and kindergartens, which last two kinds of schools were attended by 502 students, while 8,913 students attended normal schools for elementary instruction. In Austria, as well as in Germany and Switzerland, the teachers of secondary schools are, as a rule, graduates of the philosophical faculty of universities. According to their nationalities the students of normal schools in Austria are to be classified as follows:

Nationality of students.	Nation- ality of men.	Nation- ality of women.
	<i>Per cent.</i>	<i>Per cent.</i>
German	48.3	49.8
Bohemian	26	20.1
Polish	12.4	16.5½
Ruthenian	5	1.5
Southern Slavic	4.6	5.1
Italian	1.8	5.8
Roumanian	1.2	0.4
Hungarian		0.5

Thirty-two per cent of the men and 23 per cent of the women were free from paying tuition fees, being supported by scholarships. Of 1,203 senior male students who submitted to the final examination, only 1,007 (or 83.6 per cent) passed; of 502 senior female students, 476 (or 94.8 per cent) passed. This, however, does not state the number of teachers who were qualified, since 1,076 candidates (both men and women) obtained a teacher's diploma by submitting to the same examination without having attended a normal school. Of this number, 909 were qualified for conducting kindergartens or teaching female handiwork (so-called industrial teachers). Hence the real number of new elementary teachers throughout Austria (Cisleithania) in 1889 was 1,143, which would seem a small number if compared with the sum total of elementary teachers employed, 60,126; of which 6,930 were women who taught female handiwork.

7.—SPECIAL SCHOOLS.

Austria had, in 1889, 70 commercial schools, with 575 teachers and 10,003 students, of whom 9,387 remained on the roll at the close of the year. Lower Austria had 18 of such schools, Upper Austria 2, Salzburg, 1, Styria 4, Carinthia 2, Coastland 2, Tyrol 5, Bohemia 26, Moravia 4, Silesia 2, Galicia 3, and Bukowina 1.

Of 100 students in these commercial schools, 72.5 per cent were Germans, 16.6 per cent Bohemians, 2.1 per cent Poles, 0.1 per cent Ruthenians, 2 per cent Southern Slavs, 2.4 per cent Italians, 0.3 per cent Roumanians, 3.1 per cent Hungarians, 0.9 per cent of other or unknown nationality.

Of 100 students, 72 per cent were Catholics, 0.8 per cent Oriental Greeks, 3.6 per cent Protestants, 23.5 per cent Israelites.

Austria had, in 1889, 619 industrial schools, which, according to their object in view, may be grouped as follows:

(A) Twenty-one technical schools for staple trades.

(B) One hundred and eighteen technical schools for separate branches.

(C) Six general industrial schools for artisans.

(D) Four hundred and seventy-four general industrial continuation schools.

The German and Bohemian parts of Cisleithania had the most of these schools, as is seen from the following table:

	A	B	C	D	Total.		A	B	C	D	Total.
Lower Austria.....	3	11	....	125	139	Coastland.....	1	5	....	7	13
Upper Austria.....	....	6	....	8	14	Moravia.....	2	12	....	46	60
Tyrol.....	1	17	1	16	35	Silesia.....	1	8	....	13	22
Bohemia.....	6	45	5	188	244	Galicia.....	3	5	....	12	21
Salzburg.....	1	1	....	4	6	Bukowina.....	1	....	....	3	4
Styria.....	1	1	....	36	38	Total.....	....	....	....	....	619
Carinthia.....	1	2	....	7	10						
Carniola.....	....	4	....	9	13						

The number of teachers in these 619 industrial schools during the year 1888-89 was 3,754, and the number of students 64,439; this is an increase of 304 teachers and 5,493 students over the previous year.

Of every 100 students 49.1 were Germans, 39 Bohemians, 4.3 Poles, 0.3 Ruthenians, 3.1 Southern Slavs, 2.8 Italians, 0.1 Roumanians, 0.9 Hungarians, 0.4 other or unknown nationality.

It is interesting to compare the following data with similar ones in commercial schools:

Students.	In industrial schools.	In commercial schools.
	<i>Per cent.</i>	<i>Per cent.</i>
Catholic.....	93.7	72
Oriental Greek.....	0.1	0.8
Protestant.....	2	3.6
Jewish.....	3.9	23.5
Others.....	0.3	0.1

During 1888-89 Austria had 277 music schools for vocal and instrumental music, with 728 professors and 13,978 students.

During the same year the authorities recorded the existence of 99 secondary and lower agricultural and forestry schools, with 611 teachers and 2,618 students. These schools are grouped as follows:

Secondary agricultural schools.....	12
Secondary forestry schools.....	3
Secondary oenological and pomological school.....	1
Lower agricultural schools.....	30
Agricultural winter schools.....	23
Dairy schools.....	5
Lower forestry schools.....	5
Schools for the cultivation of fruit trees, grape vines, and hops.....	16
Schools for brewing and distilling.....	4

Other special schools maintained in Austria are—

	Number.	Number of teachers.	Number of students.
Lower mining schools.....	5	10	121
Nautical schools.....	3	25	98
Veterinary schools.....	6	34	635
Schools of midwifery.....	14	24	777
Schools of female industry.....	370	730	18,484
Other special schools.....	240	2,177	13,431

The Austrian statistical bureau excludes from the statistics of public education all orphan asylums, blind and deaf-mute asylums, reform schools, children's asylums, and similar institutions, because they will appear in a separate volume prepared by the division of hygiene; hence we can not give any information concerning them.

There is, however, another group of special private schools not yet mentioned in the above table. They are:

	Number.	Number in Vienna.
(A) Language schools	78	58
(B) Schools of caligraphy and shorthand	13	9
(C) Schools for physical training	27	8
Dancing schools	53	32
Fencing schools	12	8
Riding schools	9	4
(D) Schools of dramatic art	3	3
Total	195	122

II.—IN HUNGARY.

SOURCES OF INFORMATION.

- (1) Auszug aus dem 19. Jahresbericht des Ministers für Cultus und Unterricht.
- (2) Austrian educational journals.

1.—INTRODUCTION.

Most of what has been said concerning the historical development of the schools in Austria (Cisleithania) [see p. 417] is applicable also to Hungary (Transleithania), since the latter country gained autonomy only after the war with Prussia in 1866, and the strictly Hungarian school management dates from 1869. The last annual report of the minister of public instruction is the nineteenth since the new era, and hence offers most interesting comparisons covering a period of twenty years. At present the elementary schools in Hungary are governed by the laws passed by parliament in 1876 and 1879. These laws are referred to in the following paragraphs where it seemed necessary to point out differences between Austria and Hungary.

2. ELEMENTARY EDUCATION.

Area and population of Hungary.—According to the census of 1880, Hungary has an area of 280,399 square kilometers and 13,749,603 inhabitants (exclusive of non-autonomous countries belonging to the Austro-Hungarian Empire, but not to the Kingdom of Hungary, such as Bosnia, etc.).

Children of school age.

	In 1869.	In 1889.
6 to 12 years	1,615,181	1,785,506
12 to 15 years	669,560	683,120
Total	2,284,741	2,468,626

This is an increase of 8.04 per cent in twenty years. In 1869 Hungary had 16.85 per cent, in 1889 it had 17.2 per cent of children of school age (6 to 15 years) in the entire population.

Children enrolled in elementary schools.

	In 1869.	In 1889.
6 to 12 years	1, 106, 904	1, 544, 637
12 to 15 years	45, 211	470, 975
Total	1, 152, 115	2, 015, 612

This shows an increase of nearly 75 per cent over 1869. In 1869 Hungary had 8 per cent, in 1889 it had 14.66 per cent of the children of school age enrolled in school; 453,014 children escaped enrollment.

In 1889 there were in school—

Children classified according to their mother tongue.

Nationality.	No. of children of school age.	No. of attendance.	Percent.
Hungarian	1, 216, 786	1, 039, 608	85.4
German	342, 482	308, 552	90
Roumanian	392, 467	244, 540	62.3
Slavonian	330, 103	279, 197	84.5
Servian	71, 355	56, 275	78.8
Croatian	50, 055	29, 816	79.5
Ruthenian	65, 318	47, 624	72.9

Absence from school.—During 1889 the aggregate number of days' absence caused by 4,286,780 pupils was 10,488,579, which is an average of 8 days per child. Thirty-five per cent of the enrolled children were not absent at all. Ninety-five per cent of the cases of absence were considered excusable, while 5 per cent were submitted to the decision of the authorities, who imposed fines when no valid excuse could be furnished. The minister states that though the fines imposed amounted to \$185,756, only \$14,510 were actually paid, from which fact he infers that the communal authorities are very lax in the enforcement of the compulsory-attendance law.

Communities and elementary schools.

	In 1869.	In 1889.
Organized communities	12, 757	12, 685
Organized schools	13, 798	16, 702

In 1869 there were still 1,598 communities, or 12.53 per cent, without a school, but in 1889 this number had decreased to 244, or 1.92 per cent.

Character of the elementary schools.—Regarding their support we find the following tabular statement instructive:

Schools.	In 1869.		In 1889.	
	Number.	Per cent.	Number.	Per cent.
State.....	None.	.....	792	4.74
Communal.....	479	3.47	1,935	11.60
Roman Catholic.....	5,217	37.81	5,402	32.35
Greek Catholic.....	2,058	14.91	2,157	12.92
Oriental Greek.....	1,604	11.62	1,783	10.68
Reformed Evangelical.....	2,450	17.76	2,374	14.24
Augsburg Evangelical.....	1,397	10.12	1,431	8.56
Unitarian.....	103	0.75	44	0.26
Jewish.....	490	3.55	564	3.38
Private.....	None.	.....	179	1.07
Schools supported by societies.....	None.	.....	41	0.24
Total.....	13,798	.....	16,702	.....

Grades of elementary schools.

Schools.	In 1869.	In 1889.	
		Number.	Per cent.
Primary.....	13,798	16,455	98.52
Superior primary.....	None.	68	0.41
Superior girls' schools.....	None.	17	0.10
Citizens' schools.....	None.	162	0.97

Coeducation in elementary schools.

Schools.	In 1869.		In 1889.	
	Number.	Per cent.	Number.	Per cent.
Boys'.....	677	4.91	1,174	7.04
Girls'.....	499	3.61	1,339	8.02
Mixed.....	12,622	91.48	14,189	84.94
Total.....	13,798	.....	16,702	.....

Number of classrooms in elementary schools.—In 1869 the schools had 16,899 separate rooms; in 1889, 24,655, which is an increase of 45.89 per cent in twenty years.

Elementary schools classified according to the languages spoken as means of instruction.

	State schools.	Commercial schools.	Church schools.	Private schools.	Total.
Hungarian (a)	757	1,259	6,633	200	8,849
German (a)		68	615	1	684
Roumanian (a)		137	2,290	4	2,431
Slavonian (a)		69	1,320		1,389
Servian (a)		65	222		287
Croatian (a)		3	38		41
Ruthenian (a)		6	221		227
Italian (a)		5	2		7
German (b)	14	192	676	15	897
Roumanian (b)	3	40	542		585
Servian (b)	6	32	754		792
Servian (b)	1	23	36		65
Croatian (b)	7	16	95		118
Ruthenian (b)		1	310		311
Another language (b)		10	29		39
Roumanian and German		2	4		6
Slavonian and German		2	8		10
Total	788	1,935	13,795	220	c 16,738

a Spoken exclusively.

b Spoken together with Hungarian.

c This total does not agree with the total number of schools (16,702) mentioned before, but the difference may be accounted for by double enrollment of schools in this list.

Number of teachers in elementary schools.

	In 1869.		In 1889.	
	Number.	Per cent.	Number.	Per cent.
Total	17,792		24,645	100
Holding diploma	(a)		21,738	88.21
Without diploma	(a)		2,907	11.79
Regular teachers	15,968	89.13	21,716	88.12
Assistants	1,824	10.87	2,929	11.88
Men	17,106	96.15	21,356	86.66
Women	686	3.85	3,289	13.34

a Not known.

Of the total number of teachers in 1889, 87.85 per cent spoke Hungarian as their mother tongue; 4.06 per cent spoke it well, though not born of Hungarian parents; 5.14 per cent spoke it a little; 2.95 per cent not at all. Since the passage of the law of 1879, which, in section XVIII, makes Hungarian an obligatory branch of study, the number of teachers who can teach Hungarian has increased 31.58 per cent.

Expenditures for elementary schools.—The following statements are computed from the official source mentioned before (1 florin taken as 35.7 cents):

Sum total in 1869	\$1,342,364
Sum total in 1889	5,396,777

Sources of income.

	In 1869.		In 1889.	
	Amount.	Per cent.	Amount.	Per cent.
Interest from real estate	\$53,927	4.02	\$884,583	16.39
Interest from funds	27,526	2.05	153,282	2.84
Tuition fees	179,871	13.40	676,868	12.54
State appropriation	14,556	1.08	640,542	11.87
Municipal appropriation	711,689	53.02	1,530,865	28.37
Church subvention	277,908	20.79	1,255,868	23.27
Other sources	76,887	5.73	254,769	4.72

Of the total sum expended for elementary schools in 1869, 95.93 per cent (or \$1,287,383) were applied to pay salaries, 4.07 per cent (or \$54,982) for buildings and contingent expenses. This ratio was changed very essentially in 1889, when it was 74.89 per cent (\$1,041,714) for salaries and 25.11 per cent (\$1,355,063) for buildings, etc.

The following averages are valuable, since they afford an opportunity for comparison with other countries. The burden of establishing and maintaining elementary schools was:

	1869.	1889.
Per capita of the population	\$0.10	\$0.39
Per capita of school population	1.26	2.67
Per capita of teachers.....	75.44	218.98

Compare with this the fact that in Prussia the per capita of the population for all the schools is 1.86, in Saxony \$2.28, in the United States \$2.82.

Elementary normal schools.

	In 1869.		In 1889.	
	Number.	Per cent.	Number.	Per cent.
For men only	39	84.8	54	75.
For women only.....	7	15.2	17	23.6
Mixed			1	1.4
Total	46		72	

The state maintained 5 (10.9 per cent) of the normal schools in 1869, but 25 (34.7 per cent) in 1889; the church 41 (89.1 per cent) in 1869, but 47 (65.3 per cent) in 1889. In 1869 the normal schools were attended by 1,386 young men and only 140 young women; in 1889 the number of young men was 2,666 and that of the young women 1,118, a total of 3,781 students in 1889. The normal schools had 271 professors and teachers in 1869, and 710 in 1889. The number of graduates in 1869 was 462; in 1889, 1,083.

While the official report fails to state the running expenditures for normal schools in 1869, it states them for 1889 to have been \$360,635, which is an average of \$95.59.

Number of children in infant schools.

	In 1869.	In 1889.	
		Number.	Per cent.
For boys	18,624	23,023	47.44
For girls		31,043	52.56
Total.....	18,624	59,066	

The number of such schools increased from 255 to 644 in twenty years; that of the teachers and nurses from 315 to 1,345.

The expenditures for the maintenance of infant schools amounted to \$161,180 in 1889, or \$2.72 per capita. These institutions had an irreducible fund of \$619,578. The teachers for these infant schools are prepared by three kindergarten seminaries of the Fröbel Society, which had, in 1889, 25 teachers and 204 graduates, of whom 109 received a state diploma. The expenditures for these seminaries amounted to \$7,351.

Pensions and aid to widows and orphans.—During the year 1889 15,549 (or 63 per cent) of all the elementary teachers in Hungary contributed to the pension fund (in 1875 only 8,537). The fund amounted to \$2,588,726 in 1889, and the payments made to beneficiaries amounted to \$95,119, or 3.67 per cent of the fund.

Beneficiaries in 1889.—Pensioned teachers, 829; subventions to widows, 3,212; policies paid at death, 30; a total of 4,000 cases.

Schoolhouses and apparatus.—The number of schoolhouses for elementary schools built for the purpose was 15,291 (or 91 per cent); 1,488 schools (or 9 per cent) were kept in rented quarters. The number of classrooms was 24,655, or 272 more than during the previous year. In order to accommodate all the pupils enrolled so as to prevent overcrowded schools about 5,000 rooms are needed.

The minister of public education also offers in the following statement information such as would be welcome in any school report. An inventory of school apparatus held at the close of 1888-89 showed that there were 30,425 large blackboards in 24,655 rooms; 5,060 collections for object-teaching in 16,455 elementary schools; 18,794 sets of charts for reading and writing in 16,455 elementary schools; 14,972 collections for teaching arithmetic objectively in 16,455 elementary schools; 16,454 copies of wall maps of Hungary, 6,719 copies of wall maps of Austria, 11,908 copies of wall maps of Europe, and 6,088 copies of wall maps of the globe in 16,702 elementary schools; 12,702 globes and astronomical apparatus, 5,997 collections of physical apparatus, and 11,282 collections of natural history in 16,702 elementary schools; 6,340 models for drawing and 2,874 sets of apparatus for gymnastics in 15,363 elementary schools; 7,033 educational and juvenile libraries, and 1,458 popular libraries.

The number of school gardens was 8,989 in 1889, and that of tree nurseries belonging to elementary schools was 10,830 in the same year. Of every 1,000 schools, 538.2 had a school garden and 648.4 a tree nursery.

The number of gymnastic halls connected with elementary schools was 2,874; that of grounds for open-air gymnastics was 7,855.

During the year 1888-89 76 per cent of all the elementary teachers, 18,602 in number, had their dwellings in the schoolhouses, while 6,043 (or 24 per cent) received a suitable compensation for paying rent.

3.—MIDDLE SCHOOLS.

Advanced (or superior) elementary schools.—This group of schools consists of institutions such as are called middle schools in Prussia, écoles primaires supérieures in France, and with us public high schools, as found in small country towns. They are advanced grades of grammar schools, but separate for boys and girls. Their course of study is one of three years for boys and two years for girls.

In 1889 there were 68 of such advanced elementary schools, with 301 teachers and 2,562 pupils (689 boys and 1,873 girls). The expenditures amounted to \$69,984 in 1889, of which sum the state defrayed 40.74 per cent. The per capita was \$27.11.

Citizens' schools, or public advanced schools for boys and girls.—While the group of schools previously mentioned is decreasing in number, this one is increasing steadily. Their number in 1889 shows an increase of 5. Seventy-seven of these middle schools (that is the generic term for this class of schools in central Europe; middle, because between elementary and secondary) were boys' and girls' schools.

In 1889 there were 162 of such schools, with 1,151 teachers and 18,484 pupils (9,699 boys and 8,785 girls). Nothing will more clearly state the difference of these citizens' or middle schools from purely elementary schools, than the fact that they had 782 class rooms, 146 offices or teachers' rooms, 117 recitation rooms, 44 library rooms, 30 laboratories, and 45 gymnasiums. The expenditures amounted to \$435,958 in 1889, of which sum the state defrayed 39.60 per cent. The per capita was \$23.58.

Girls' higher schools.—These schools, of which Hungary had 17 in 1889, are also classed among the middle schools. They had 224 teachers and 2,124 pupils. The expenditure amounted to \$102,718, of which sum the state defrayed 54.80 per cent. The per capita was \$48.36.

4.—NORMAL SCHOOLS.

Hungary had, in 1889, 72 normal schools for elementary teachers. It is the intention of the law that these schools should prepare teachers by means of purely professional training, but the minister states that many of them are still burdened with academic studies from want of preparation on the part of the candidates for admission. A large number of the denominational normal schools are merely supplements of schools designed for other purposes, and 36 per cent of the denominational normal schools have not even a practice school.

Hungary had, in 1889, 25 state, 24 Roman Catholic, 4 Greek Catholic, 4 Greek Oriental, 4 Reformed Evangelical, 10 Protestant (of the Augsburg confession), and 1 Jewish, a total of 72 normal schools. Sixty-nine of these prepared teachers for lower elementary schools, and three teachers for advanced elementary schools.

The number of students in these 72 schools was 4,116 (2,926 young men, and 1,190 young ladies), an increase of 241 over the previous year.

Ten per cent of the students withdrew during the year for various reasons. All these schools have a four years' course. Comparing the following columns we see that the number of withdrawals during the year is greater among the men than among the women.

	Men.	Women.
First year.....	894	334
Second year.....	768	313
Third year.....	701	313
Fourth year.....	303	153

Hence, of 894 men entering the first year's course, only 303 completed the course (only 34 per cent); out of 334 women 158 completed the course (47 per cent).

During 1889 the number of teachers (professors and assistants in normal schools) was 710, an increase of 25 over the previous year.

The expenditures for 1889 were \$360,636, of which the state bore 61.9 per cent; the church funds yielded 12.20 per cent; the private funds of endowed institutions 12.6 per cent; tuition fees 13.3 per cent.

The following statement is interesting, inasmuch as it shows the different appreciation state and church entertain for professional training of teachers.

The per capita of expenditure in Hungarian normal schools in 1889 was—

Schools.	Men.	Women.
State normal.....	\$127.80	\$199.92
Roman Catholic normal.....	40.69	42.13
Greek Catholic normal.....	29.27	.....
Greek Oriental normal.....	37.48	.....
Protestant Evangelical normal.....	71.40	.....
Protestant Augsburg (confession) normal.....	78.90	.....
Jewish normal.....	91.11	.....

5.—INFANT SCHOOLS.

During the year 1889, 474 of 12,685 communities in Hungary had infant schools and Kindergärten, the entire number of which was 644. Forty-two of these were maintained from endowment funds, 65 by the State, 163 by communities, 184 by societies, and 87 by private persons. These 644 infant schools had 59,066 pupils of prescholastic age, commonly between 3 and 6 years. They were kept by 722 kindergardners and 504 assistants, called nurses. Five hundred and four had diplomas; 268 had not. Forty-seven were men, 725 were women; 623 were secular, 149 clerical persons (nuns).

The 644 institutions had 471 play and gymnastic grounds, 582 play and work rooms, 252 gardens, and 252 common court yards for play. In 591 of these institutions the ruling language was Hungarian; in 13

it was German; in 32 both Hungarian and German were used. The cost of maintenance for 1888-89 amounted to \$161,170.

The Society for the Promotion of Infant Schools and Central Fröbel Women's Society maintained as heretofore normal schools for the preparation of kindergartners. A similar institution is found in the convent at Kolocsa. The total number of students was 212, of whom 204 completed the course. The number of teachers was 25, and the expenditures for maintaining these institutions amounted to \$7,351.

It is the intention of the minister of public instruction to aid all persons and societies who are making efforts in behalf of infant schools and Kindergärten and to subsidize such institutions, so that in a few years all densely populated centers of the kingdom will have at least one of these institutions.

6.—SECONDARY SCHOOLS.

It is a noticeable feature of the Hungarian school system that it recognizes only two kinds of secondary schools: the "Gymnasium" and the "Realschule" (the classical and the modern school). While in Germany several other kinds, the "Realgymnasium," "höhere Bürgerschule," "höhere Schule ohne Latein," etc., make it difficult to classify the statistical data of secondary education, Hungary offers no difficulty in this respect. The one momentous question that occupied the management of these schools in 1888-89 was the new law of June 24, 1888, which made Greek an optional study. The minister reports that it was not the intention of the law to exclude Greek, but to facilitate the selection of a profession. Twenty-six per cent of pupils in grade V and 36 per cent in grade VI availed themselves of the permission granted by the law and chose other studies, chiefly Hungarian literature and drawing.

The following statistics are culled from the minister's annual report for 1888-89:

Secondary schools.	Gymnasium.	Realschulen.	Total.	Grand total.
Under state's management, secular	12	19	31	} 49
Under royal management, secular	18	.....	18
Under state's supervision:				
Catholic	43	43	} 73
Communal	18	6	24	
Private	5	.....	5
Jewish .....	.....	1	1
Under partial supervision of the state, but under management of religious bodies:				
Greek	3	1	4	} 58
Protestants	22	2	24	
Reformed	27	.....	27
United Protestant	1	.....	1
Unitarian	2	.....	2
Totals	151	29	180	180

Ninety-one gymnasia have 8 grades, 15 have 6 grades, and 41 have 4 grades. Twenty-two of the Realschulen have 8 grades, 2 have 6

grades, and 5 have 4 grades. Four secondary schools have an irregular organization. The secondary schools of Hungary had a total of 43,670 students in 1888-89, 36,367 of whom attended the classical and 7,303 the modern schools, which expressed in ratios is 83.3 per cent in gymnasia and 16.7 per cent in Realschulen; but, while the increase of attendance of the former over the previous year was 1.1 per cent, that of the latter was 3.3 per cent. Hungary has 318 students in secondary schools in every 100,000 inhabitants, Austria 334, Prussia 467.

The following table is offered to show the grading of students:

Grades.	Under state's—		Church schools.				Total.	Under state's—		Church schools.		Total.	Grand total.
	Disposition.	Supervision.	Oriental Greek.	Protestant, Augsburg confession.	Reformed Evangelical.	Unitarian.		Disposition.	Supervision.	Oriental Greek.	Protestant, Augsburg confession.		
Gymnasia.							Realschulen.						
I	2,008	3,779	161	1,199	1,380	70	8,597	1,329	494	43	176	2,042	10,639
II	1,489	2,736	116	899	1,066	62	6,368	975	395	33	112	1,515	7,883
III	1,271	2,302	107	752	972	51	5,455	894	345	33	89	1,370	6,825
IV	1,086	2,004	63	633	875	46	4,707	662	225	19	46	952	5,659
V	833	1,446	57	466	726	35	3,563	389	93	.....	27	509	4,072
VI	666	1,152	39	419	629	40	2,945	293	76	.....	15	384	3,329
VII	528	940	40	392	477	33	2,410	229	49	.....	11	289	2,699
VIII	478	843	39	380	547	35	2,322	189	41	.....	12	242	2,564
Total..	8,359	15,202	622	5,140	6,672	372	36,367	4,960	1,718	128	497	7,303	43,670

The fact that in gymnasia about 25 per cent of the students entering the lowest class reach the highest, while in Realschulen only about 10 per cent, is remarkable, and proves that in Hungary classical education is firmly rooted, while so-called modern education is discounted. The cause is to be found in the fact that all who aim at entering the university and the professions are obliged to pass through a gymnasium.

Though the sum total of enrolled secondary students was 43,670, the number of those who attended the whole year was only 40,596.

The last number is accounted for in the minister's report when he states the fees paid for tuition—32,017 paid the fees in full, 2,023 only half the fees, 6,566 paid no fee. The amount paid per student is not mentioned.

The mother-tongue of secondary students is shown in the following table:

Nationality.	In Gymnasia.		In Realschulen.	
	Number.	Per cent.	Number.	Per cent.
Hungarian	24,562	73.5	4,680	68.8
German	4,346	12.9	1,670	24.2
Roumanian	2,228	6.3	242	3.5
Italian	105	0.3	2	0.25
Slavonian	1,559	4.6	95	1.4
Servian-Croatian	757	2.2	92	1.3
Ruthenian	87	0.2	1	0.15
Other nationalities	149	0.4	21	0.3

Only 45.7 per cent of the students were restricted to one language, while 54.3 per cent spoke either two or more languages fluently.

The age of the secondary students is shown in the following table. The age for admission to secondary schools in Central Europe is 10 years. The pupils obtain their elementary instruction in the primary or peoples' schools, or as in Prussia in preparatory classes attached to the secondary schools.

Age.	In Gymnasia.		In Realschulen.	
	Number.	Per cent.	Number.	Per cent.
10.....	1,545	4.6	349	5.8
11.....	3,864	11.4	846	12.4
12.....	5,137	15.2	1,224	18.0
13.....	5,201	15.4	1,206	17.7
14.....	4,802	14.2	1,091	16.0
15.....	4,075	12.0	785	11.8
16.....	3,112	9.5	524	7.7
17.....	2,493	7.4	330	4.2
18.....	1,793	5.3	232	3.4
19.....	1,027	3.0	110	1.6
20.....	533	1.5	51	0.7
Over 20.....	205	0.6	10	0.1

Examination for graduation and admission to a university or polytechnicum: 2,308 students applied for admission to the final examination; of these 2,083 passed the written and were admitted to the oral examination. A review examination raised the number of those admitted to oral examination to 2,219, but only 1,914 passed both examinations. Seventeen and six tenths per cent of the senior students in Gymnasia failed, 12.4 per cent of the senior students in Realschulen failed.

Professors in secondary schools.—The number of regular teachers (professors) in Gymnasia in 1889 was 1,323, in Realschulen, 334; assistants in Gymnasia, 277; in Realschulen, 37; teachers of religion in Gymnasia, 507; in Realschulen, 130; teachers of Gymnastics and those who gave only occasional lessons in Gymnasia, 190; in Realschulen, 41; drawing and other special teachers in Gymnasia, 147; in Realschulen, 45; a total of 3,031 regular, assistant, and special teachers. Of the regular professors 1,026 have a state diploma, 120 a diploma granted by church authorities, 16 foreign diplomas, 381 were recognized by law though having no diploma, 14 were engaged in teaching though having neither a diploma nor authoritative permit. Of the assistants 143 had a diploma, 171 had not. Of the teachers of gymnastics 167 had a diploma, 64 had not. Of the special teachers 121 had a diploma, 72 had not.

Other items of interest.—The 180 secondary schools had, in 1889, 1,110 class rooms, 184 museums for natural history, 191 museums for physics, 82 chemical laboratories, 129 drawing halls, 108 winter gymnastic halls, 260 library rooms, 140 conference rooms, 113 offices, 124 summer gymnastic courts, 112 yards for recreation, 188 rooms for day boarders, 370 dormitories, and 862 other localities.

*Income and expenditures for secondary schools.*¹—The value of buildings for secondary school purposes in Hungary in 1890 was 24,870,000 florins, or \$8,878,590. The total income of secondary schools was \$1,328,661. To this sum the state contributed \$322,674. The proceeds from irreducible funds amounted to \$203,597; from church funds, \$154,509; from tuition fees, \$255,552; other income (probably from local taxes), \$392,429. Hence the state contributed 24 per cent for the maintenance of secondary schools. See the following comparison with Prussia:

	Ele- mentary.	Second- ary.	Uni- versities.
State appropriation in Prussia	<i>Per cent.</i> 19.1	<i>Per cent.</i> 53.3	<i>Per cent.</i> 83.5
State appropriation in Hungary	1.08	24.2	67.0

7.—HIGHER EDUCATION.

Hungary has 3 universities, in Buda-Pesth, Klausenburg, and Agram; 1 polytechnicum in Buda-Pesth, 53 theological seminaries, and 11 law schools. The number of professors and assistant professors in 1891 was 322 in the universities, 10 in the polytechnicum, 343 in the theological seminaries, and 122 in the law school. The number of students during the same year was 4,098 in the universities, 616 in the polytechnicum, 1,855 in the theological seminaries, and 792 in the law schools. The amount expended for the two universities and one polytechnicum in 1889 was 1,020,034 florins, or \$364,152. Of this sum the state's contribution is known only for the universities, 67 per cent. The expenditures for theological seminaries and law schools are not stated in the annual report of the minister. These institutions are not under his immediate jurisdiction, the state not subsidizing them.

8.—SPECIAL SCHOOLS.

Hungary has quite an array of special schools. In 1889 it had 278 courses for industrial students or trade schools with 46,288 students and 1,445 teachers. The expenditures for these courses amounted to \$127,875. It had 83 workshops for home industry with 5,466 apprentices and 186 instructors. The expenditures for these workshops amounted to \$32,952. Hungary had also 1 school of pottery with 12 students and 2 teachers. Cost of maintenance, \$919. It had 1 industrial art school with 155 students and 10 professors. Cost of maintenance not stated, except the amount paid for scholarships, which was \$1,430. Connected with this institution is the technological and industrial museum, in which lectures are given to 455 students on technical subjects. There were also 75 elementary and 22 secondary commercial schools. The former had 4,046 students and 267 teachers, the latter 1,870 students and 282 teachers. The cost of maintenance for both kinds of schools amounted to \$120,419. The schools for

¹ 1 florin equals 35.7 cents.

midwifery had 472 students. A normal school for teachers of drawing had 90 students; a school of fine arts had 110 students and 15 professors; a school for music and the drama with 136 students and 26 teachers; besides these there were other special and philanthropic institutions and asylums for defective classes with 3,210 pupils and 195 teachers and nurses.

The annual state appropriations for educational purposes for 1891-92 in Hungary amount to \$3,643,762; in Austria, \$8,307,774; in Prussia, for the same year, \$21,581,319.

9.—MEMORABLE DATES IN THE HISTORY OF THE HUNGARIAN SCHOOLS.

1774. Expulsion of the Jesuits and Maria Theresa's School Regulations.

1848. First Hungarian Minister of Instruction, Eötvös.

1867. Separation of Austria and Hungary. Autonomy of Hungary.

1868. School law passed.

1875-76 and 1879. Amendments to school law passed.

1879. Law making the Hungarian language obligatory.

STATISTICAL SUMMARIES OF THE SCHOOLS OF AUSTRIA-HUNGARY, SWITZERLAND, SAXONY, AND WÜRTEMBERG.

Statistical summary of education in Austria-Hungary.

CISLEITHANIA (a), 1890.

Educational institutions.	No. of schools in 1888.	No. of schools in 1889.	No. of teachers in 1888.	No. of teachers in 1889.	No. of pupils or students in 1888.	No. of pupils or students in 1889.
Elementary:						
People's and citizens' schools...	17,103	17,276	58,751	60,126	2,795,304	2,831,667
Private schools		965				106,908
Total	17,103	18,241	58,751	60,126	2,795,306	2,938,575
Secondary:						
Gymnasia	173	173	3,496	3,473	52,930	52,959
Realschulen	77	79	1,341	1,371	17,287	17,586
Total	250	252	4,837	4,844	70,217	70,545
Higher:						
Universities	8	8	1,100	1,112	14,167	14,274
Polytechnica	6	6	346	348	1,643	1,569
Agricultural colleges	1	1	42	45	224	214
Mining academies	2	2	28	27	137	111
Art schools	2	3	37	43	356	433
Theological seminaries	50	43	238	244	2,267	2,317
Normal schools	70	69	994	972	8,900	9,415
Total	139	132	2,785	2,791	27,604	28,323
Special:						
Commercial schools	71	70	550	575	8,684	9,387
Industrial schools	581	619	3,452	3,754	58,063	63,439
Music schools	272	277	725	728	13,913	13,978
Agricultural and forestry schools	93	99	580	611	2,528	2,618
Mining schools	5	5	10	10	101	121
Veterinary schools	6	6	36	34	628	635
Schools of midwifery	14	14	24	24	756	777
Nautical schools	3	3	25	25	107	98
Schools for female industry	354	370	706	730	18,367	18,484
Other special schools	250	240	2,212	2,177	13,119	13,431
Total	1,649	1,703	8,320	8,678	116,266	122,968
Grand total	19,141	20,328	74,693	76,439	3,009,483	3,160,421

(a) Parts of the Empire west of the Leitha River.

Comparative statement.—(a) Elementary, 92.98 per cent; (b) secondary, 2.23 per cent; (c) higher, 0.89 per cent; (d) special, 3.90 per cent = 100 per cent.

Statistical summary of education in Austria-Hungary—Continued.

TRANSLEITHANIA (a), 1890.

Educational institutions.	No. of schools in 1888.	No. of schools in 1889.	No. of teachers in 1888.	No. of teachers in 1889.	No. of pupils and students in 1888.	No. of pupils and students in 1889.
Elementary:						
Infant schools	603	644	739	1,276	55,639	59,066
People's and citizens' schools (both private and public) (b) ..	16,622	16,702	24,279	24,645	1,950,879	2,015,612
Total	17,225	17,346	25,118	25,921	2,006,518	2,074,678
Secondary:						
Gymnasiums	151	151	2,287	2,444	35,956	36,367
Realschulen	29	29	575	587	7,069	7,303
Total	180	180	2,862	3,031	43,025	43,670
Higher:						
Universities	2	2	322	322	4,107	4,098
Polytechnicums	1	1	8	10	616	616
Theological seminaries	53	53	343	343	1,912	1,855
Law schools	11	11	119	122	796	792
Normal schools	72	73	687	712	4,057	3,871
Total	139	140	1,479	1,509	11,468	11,222
Special:						
Trade schools	256	278	1,378	1,445	44,234	46,288
Schools for home industry	90	83	213	186	5,517	5,466
School of pottery	1	1	2	2	14	12
Industrial art school	1	1	10	10	134	155
School of design	1	1	16	16	311	455
School of fine arts	3	3	15	15	97	110
School of music and drama	1	1	26	26	186	136
Elementary commercial	65	75	259	267	3,868	4,046
Higher commercial	22	22	242	282	2,530	1,870
School of midwifery	1	1	5	5	358	472
Other special schools	77	78	137	195	3,010	3,210
Total	518	544	2,303	2,449	60,299	62,220
Grand total	18,062	18,210	31,762	32,910	2,121,330	2,191,790

a Parts of the Empire east of the Leitha River.

b Only 1 per cent private.

Comparative statement.—(a) Elementary, 94.66 per cent; (b) secondary, 2 per cent; (c) higher, 0.5 per cent; (d) special, 2.85 per cent=100 per cent.

Statistical summary of education in Germany.

KINGDOM OF SAXONY, 1889.

Educational institutions.	No. of schools in 1889.	No. of teachers in 1889.	No. of pupils and students in 1889.	Educational institutions.	No. of schools in 1889.	No. of teachers in 1889.	No. of pupils and students in 1889.
Elementary:				Special:			
Public schools	2,205	7,899	578,794	Schools for defectives	11	115	1,056
Continuation schools	1,934			Reform schools	11	24	2,122
Parochial and private	90			Industrial and trade schools	87	458	7,618
Total	4,229	8,492	661,464	Industrial continuation schools	28	316	7,912
Secondary:				Schools of fine arts	12	242	3,283
Gymnasias, Realschulen, Realgymnasias, etc.	53	958	14,439	Commercial schools	22	184	7,199
Higher:				Agricultural schools	9	76	
Normal schools	19	287	2,475	Special schools for young ladies	11	81	1,081
University	1	184	3,583	Military schools	3	59	789
Polytechnicum and other professional schools	4	88	734	Total	294	1,525	31,043
Total	24	539	6,792	Grand total	4,515	11,524	713,738

Comparative statement.—Elementary, 92.67 per cent; secondary, 2.02 per cent; higher, 0.55 per cent; special, 4.36 per cent=100 per cent.

Statistical summary of education in Germany—Continued.

KINGDOM OF WÜRTTEMBERG, 1889.

Educational institutions.	No. of schools in 1889.	No. of teachers in 1889.	No. of pupils or students in 1889.	Educational institutions.	No. of schools in 1889.	No. of teachers in 1889.	No. of pupils or students in 1889.
Elementary:				Higher—continued:			
Public	1,413	4,634	327,704	Polytechnicum	1	57	274
Continuationschools	864	864	18,808	Total	13	286	2,807
Total	2,277	5,498	346,512	Special:			
Secondary:				Agricultural schools	9	10	164
Gymnasia	92	425	8,425	Architectural school	1	31	464
Realschulen	77	276	8,593	Industrial continuation schools	199	911	18,686
Girls' high schools	13	218	3,576	School of fine arts	1	11	80
Total	182	919	20,594	Industrial art school	1	9	109
Higher:				Conservatory of music	1	42	529
Normal	9	79	915	Schools for defectives	10	56	1,122
University	1	113	1,426	Total	222	1,070	21,156
Agricultural college	1	21	87	Grand total	2,694	7,773	391,069
Veterinary college	1	16	105				

Comparative statement.—Elementary, 88.60 per cent; secondary, 5.26 per cent; higher, 0.72 per cent; special, 5.42 per cent=100 per cent.

Statistical summary of education in Switzerland.

FEDERAL AND CANTONAL SCHOOLS.

Educational institutions.	No. of schools in 1888.	No. of schools in 1889.	No. of teachers in 1888.	No. of teachers in 1889.	No. of pupils and students in 1888.	No. of pupils and students in 1889.
Elementary:						
Infant	508	515	581	589	20,745	21,689
Primary	8,101	8,341	9,031	9,151	471,016	475,012
Advanced primary	451	457	1,349	1,373	26,164	27,254
Continuation schools	1,160	1,184	(a)	(a)	32,764	34,817
Private schools	142	142	602	641	8,335	8,123
Total	10,362	10,639	11,563	11,754	559,024	566,900
Secondary:						
Gymnasia and lycées	56	57	702	709	7,022	7,753
Girls' high schools	(?)	(?)			2,789	3,367
Total	(?)	(?)	702	709	10,409	11,120
Higher:						
Normal	37	37	260	273	1,921	2,018
Universities	9	9	385	434	2,559	2,619
Polytechnicum	1	1	113	100	970	992
Veterinary college	2	2	6	7	102	109
Total	49	49	764	814	5,552	5,738
Special:						
Schools for defectives	63	64	198	208	1,970	2,017
Industrial schools	(?)	(?)	193	200	3,617	3,850
Commercial schools	(?)	(?)	13	12	494	485
Agricultural schools	(?)	(?)	10	10	265	276
Technical schools	(?)	(?)	84	98	1,218	1,367
Total	(?)	(?)	498	528	7,564	8,595
Grand total	(?)	(?)	13,527	13,805	582,549	592,353

a Teachers of primary schools.

Comparative statement.—Elementary, 95.73 per cent; secondary, 1.86 per cent; higher, 0.56 per cent; special, 1.45 per cent=100 per cent.



Explanation of diagram.—The part of each bar shaded lengthwise represents the ratio of *elementary*, the part shaded across the ratio of *secondary*, and the part in black the ratio of *superior* (or university) education.

CHAPTER XII.

BRIEF STATEMENT OF THE SCHOOL SYSTEM OF PRUSSIA.¹

INTRODUCTION.

The German Empire, being a federation of states (kingdoms, duchies, principalities and free cities), does not maintain a national school system, but since the army and navy are imperial, the military and naval academies are under the immediate care of the Imperial Government. Each state maintains its own school system; hence an outline of any of the systems of Prussia, Saxony, Bavaria, or Württemberg may serve as a representative German system; the differences are slight and chiefly refer to supervision and courses of study.

I.—THE SCHOOLS OF PRUSSIA.

Establishment and maintenance.—The public schools are established and maintained partly by the state, partly by the communities. The state gives precedence to the communities in establishing elementary schools, called Volksschulen (people's schools), and takes the initiative only in cases of inability on the part of the communities. The state's proportion of the annual expenditure for elementary school purposes is about 19 per cent of the whole. To a great extent this policy is adhered to also with reference to so-called modern secondary schools, such as scientific, technical, and industrial schools, but the state's proportion of the cost is greater there than in the lower schools; it is 37 per cent; while with regard to classical secondary schools the proportion is 69 per cent. In regard to higher education, such as is offered in universities and art academies, the state takes the initiative and assumes all expenses. Many schools, both elementary and secondary, are partially supported by the proceeds of the permanent school funds that have their origin in endowments, legacies, sequestration of church property, and other sources. The annual proceeds from these funds amount to 6 per cent of the entire expenditures for elementary school purposes.

¹ Prepared by Dr. L. R. Klemm, specialist, in foreign school systems.

There are no parochial schools in Prussia, that is, schools owned and managed by religious bodies, but all elementary schools are exclusively Protestant, Catholic, or Jewish schools. Schools in which all the confessions are represented (so called "Simultanschulen") are comparatively rare, and their establishment is discouraged by the Government. Private efforts in founding and supporting a variety of educational institutions, differing in scope, character, and aims, are frequent and much encouraged by the authorities, owing to the prevailing class distinctions in the society of the Old World. Reform ideas are usually propagated in private institutions until the Government becomes convinced of their strength and popularity, and adopts them; in that case it begins by subsidizing and subsequently ends by maintaining the schools that represent these ideas.

School statistics of Prussia for 1887.

[Latest official report. Total population of the kingdom (census of 1890), 29,959,387]

	Ages.	Number of pupils.	Sex.	Number of teachers.	Attendance.
Kindergarten (private)...	2 to 6	Unknown.	Both sexes.....	Unknown	(?)
Elementary schools:					"Calculated to range between 90 and 95 per cent of the number enrolled." Information furnished by an official in Berlin.
Public (so-called people's schools).	{ 6 to 14	4,874,374	Boys.....2,440,094 Girls.....2,434,253	{ 66,133	
Private.....	6 to 14	8,763	Boys.....2,500 Girls.....6,263	{ 268	
Elementary preparatory: Classes of secondary schools.	{ 6 to 10	299,289	Boys.....279,189 Girls.....20,100	{ 7,489	
Total elementary...	a5,182,390	73,881	
Secondary schools:					"Calculated to range between 92 and 96 per cent of the number enrolled."
Of a low grade similar to American high schools.	{ 10 to 17	293,310	Boys.....92,084 Girls.....111,226	{ 10,433	
Of a high grade, classical and modern, leading up to universities and polytechnica.	{ 10 to 18 or 20	{ 153,692	Boys.....153,692 Girls.....none	{	
Total secondary...	.....	b356,912	.....	10,433
Normal schools.....	18 to 21	9,033	106 schools for men 10 schools for women	{ 833	No data.
Universities.....	18 to 22	13,852	Men only.....	1,363	
Total higher.....	.....	22,945	.....	2,196
Special schools.....	(?)	(c)	Sexes taught in separate schools.	(?)	

a 18.3 per cent of the population.

b 1.2 per cent of the population.

c No data.

A comparison of the numbers in column "Sex" reveals the interesting fact that girls are in the minority in secondary and superior institutions, and also in the preparatory classes that lead up to secondary schools. The proportion of boys to girls in secondary schools is more than 2 to 1; in normal schools it is as 10 to 1; in universities and polytechnica only male students are admitted.

Expenditures for public-school purposes in 1888.—The official report for 1887 calculates the expenditures for 1888 to be as follows:

Schools.	Total.	Per capita of population.
For elementary, so-called people's schools.....	\$39,225,750	\$1.39
For secondary, both of low and high degree.....	7,287,125	.26
For higher, universities.....	3,857,875	.14
For special schools of various kinds.....	2,231,750	.07
Total.....	52,702,500	1.86

This sum total is obtained from various sources that may be grouped under three heads: (a) *Funds*, that is, irreducible funds, of which only the annual proceeds may be used; (b) *State taxes*; (c) *local taxes and tuition fees*. In order to avoid repetition the proportions are stated below in percentages:

	Elementary schools.	Secondary schools.	Higher institutions.	Special schools.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Proceeds of funds.....	6.0	23.1	16.5	18.9
State taxes.....	19.1	53.3	83.5	68.3
Local taxes and tuition fees.....	74.9	23.6	.....	12.8
Total per cent.....	100.0	100.0	100.0	100.0

Hence it is obvious that the communities provide chiefly for elementary education, while the state provides chiefly for secondary, superior, and special education. In 1886 the expenses for elementary schools alone were \$29,153,912, of which \$18,811,286 were used for salaries and \$10,442,626 for buildings and incidental expenses; or, in percentages, 64.5 per cent for salaries, 35.5 per cent for buildings and incidentals.

Administration and supervision.—The minister of ecclesiastical, educational, and medical affairs, a member of the King's cabinet, has the general direction and supervision of all educational institutions of the Kingdom. The Kingdom is divided into twelve *provinces*, with from 1,000,000 to 4,000,000 inhabitants each. At the head of the administrative affairs of each province stands a president, who has a cabinet of councilors for the different branches of administration, such as land office, judicial office, school office, etc. The heads of these school departments, the provincial school councilors, are the organs of intercommunication between the minister and lower authorities. Each province is divided into four or five subdivisions called *governmental districts* (counties of enormous size, sometimes having nearly a million of inhabitants). These districts (or counties) have a complete corps of administrative officers with a district president at their head. Among these officers are school councilors, who act as examiners and supervisors for entire districts. Each district is divided into *Kreise* (circuits),

corresponding somewhat in size and population to our townships. There are city circuits and country circuits. At the head of the city government stands the burgomaster, or mayor, elected by the city council or board of aldermen, but confirmed or rejected by the Royal Government. At the head of the rural circuit stands the Landrath (country councilor). In cities a committee of three or five members of the city council act as local school board; in villages and country townships three or five leading citizens are appointed to act as a school board. Thus it is seen that from the rural school district up to the central Royal Government there is an ascending scale of administrative and directive authorities. The secondary schools that are not exclusively Government schools have each a board of trustees of their own, called *curatorium*, selected jointly by the city council, the Government, and interested parties, such as representatives of trust funds and legacies. The affairs of royal secondary schools are managed by the school councilors directly. Boards, both of lower and secondary schools, have practically the same authority that our city school boards commonly have, except in questions pertaining to *courses of study* (which are prescribed in general outlines by the central government and interpreted by the school councilors), selection of teachers (which is subject to confirmation or rejection by the Government), and other points. Cases of discipline, for instance, over which our boards have final jurisdiction, may be carried to the higher authority of provincial councilors and to the minister, before any court will entertain their consideration.

The elementary or people's schools of Prussia have, and apparently need, little direct supervision, because the teachers in Prussia must have acquired professional training before their application is entertained or their appointment confirmed by the authorities. Still there is a general supervision exercised by the state. The provincial and district councilors, mentioned above, supervise indirectly by examining the teachers at their graduation from the normal schools, and by making occasional visits in schools. They are generally considered the courts of appeal in difficulties between teachers and local school boards. Local supervision is exercised by the mayor and clergyman. In communities where a school board exists, that board either superintends the schools through its members or employs professional inspectors. The latter's duties are, to all intents and purposes, similar to those of our city school superintendents. Clergymen have been not infrequently employed as school inspectors during the last twenty years, but professional supervision is now considered preferable except for religious instruction. Many of the inspectors in Prussia are heads of normal schools, high schools, etc., and devote only a part of their time to supervision. The secondary schools are supervised by the provincial councilors. The election of their principals is subject to the confirmation of the provincial authorities. Supervisors for rural schools are employed frequently but not systematically, owing to the

fact that the school system in Prussia is not administered according to an organic law, but is subject to the orders and regulations of the cabinet minister. Each supervisor or inspector reports to his higher officer; these reports are not printed, but may be examined in the inspector's office.

Teachers.—The professional preparation of teachers in Prussia is the source of strength of the people's schools. The earliest attempts on the part of the state at improving the schools were directed at establishing normal schools.

In 1889 Prussia had 116 normal schools—106 for men, 10 for women. The cost for maintaining these schools is borne by the state exclusively. It amounts to \$150 per student per annum.

The course of study in normal schools in Prussia is one of three or four years. It embraces a thorough review of the common branches, the high-school branches, theoretical and practical instruction in instrumental music, drawing, gymnastics, and pedagogy (history of education, psychology, theory and practice of teaching). No foreign languages are taught in Prussian normal schools.

Previous to entering a normal school many students pass a year or two in a preparatory school, but this is not obligatory. They may acquire their previous education anywhere. The state being at times unable to secure a sufficient number of students, pays a premium to well-reputed teachers, who prepare boys for the normal schools. There is a rigid examination for admission. At the close of the course a still more rigid examination precedes graduation. Rarely does a student fail to graduate, the Government having taken the responsibility for his professional education. But the authorities grade the diplomas I, Ib, II, IIb, III, and IV. A teacher whose diploma numbers IV is not likely ever to obtain a lucrative position. This marking or grading the diplomas is analogous to diplomas issued in this country for one, two, three, or more years. No teacher can be permanently employed unless he has a normal-school diploma. Assistants are at times, when candidates are scarce, employed without having this diploma, but in that case they must pass an assistant's examination.

The appointment of teachers is not regulated by a general law. The power of electing the teachers is vested in communal school authorities where such authorities exist. In country places the circuit (*Kreis*) authorities perform these functions, but, whether elected by city authorities or appointed by circuit inspectors or chosen by patrons, the selection is subject to the confirmation of the representative of the Government, be that representative of the circuit, district, provincial, or state Government, as the case may be.

In the main the principle is adhered to that the local authorities choose the teachers and the Government *confirms* or *rejects* the appointment. The legal and social position of the teacher is well defined in Prussia. He is an officer of the state and receives a pension after hav-

ing taught a certain number of years, and his widow and orphans are entitled to support, though this support rarely amounts to more than one-half of the teacher's salary. By means of coöperation the teachers of every German state have founded insurance, coöperative, discount, and other societies for mutual aid, societies which in a measure supplement the work of the state.

The last official school report of Prussia, that for 1887, states the average salary of the teachers in the people's or elementary schools to have been as follows:

Average in the Kingdom:	Marks.
1837.....	1, 067 = \$266
1878.....	1, 102 = 275
Average in the cities:	
1887.....	1, 279 = 319
1878.....	1, 414 = 353

This shows a decrease in eight years of \$18 in the Kingdom and of \$33 in the cities. These salaries are comparatively smaller than in America, but the teachers in Prussia have no rent to pay, living in dwellings attached to the schoolhouses. Calculating the rent at 20 per cent, the average salary may be considered to be \$340. The salaries of rectors (principals) of large "bürger" schools in cities—superior, elementary or middle schools are higher. The teachers and professors of middle and high schools—are not included in the averages mentioned above; their salaries range much higher than the foregoing averages.

Course of study.—The course of study in elementary schools embraces religion, reading, writing, arithmetic, geography, singing, drawing, natural history, natural science, and history of man. No text-books are used for natural history, natural science, or history of man; this instruction is oral. In arithmetic, Prussian schools are less proficient than the American, but the advancement made in nearly all the studies is faster than in America. This fact is easily accounted for by (a) the difficult spelling of the English language; (b) the efforts in learning and applying the tables of our arbitrary measures and weights; (c) the greater length of school sessions and terms in Prussia, and (d) the want of a profession of teaching in this country, and consequent lack of proper teaching. These are the most important causes.

Germany is very rich in text-books. In no country is a greater variety published. This secures great variety in teaching, and a very beneficial and healthy competition among schools, and especially teachers. Of course the children of a school and of a community are required to use the same books.

Every teacher has the greatest possible liberty in the selection of the methods of teaching. No inspector (or superintendent) prescribes methods; all he does is to suggest improvements here and there. But since the state attends to the professional training of the teachers, it

can safely leave teachers to their own devices, trusting in their professional spirit and ambition.

Branches of study.—Religion: This instruction is nonsectarian in character, but Protestants, Catholics, and Israelites are as much as possible grouped in separate schools. Where they attend mixed schools they are separated only during the lessons in religion. Biblical history, catechism with bible verses, memorizing of hymns, essential points of religious ethics, and the creed, is what the public schools are required to teach. *Language and reading:* Familiarity with the mother tongue and a limited knowledge of German literature is, broadly speaking, the sum total of attainable results. *Penmanship and drawing:* As a rule the penmanship of the pupils is commendable. In drawing particularly rapid progress has been made of late. The exercises chiefly consist of ornamental drawing and form studies. In the higher grades drawing of solids and modeling is practiced. *Arithmetic:* This study is less extended than in American schools, chiefly mental work (*Kopfrechnen*) being done, and little figuring on slates and paper. *Singing:* Vocal music is practiced quite early and continued through the entire course. Three and four part music is not infrequently found in simple village schools. *Geography:* This study is pursued without a text-book, unless a small atlas may be termed a text-book. This study stands in close relation to *history*, which study is begun quite early with home stories and references to the child's home and environments. All historical knowledge is offered in biographies. *Natural history:* In form of object lessons natural history is taught without a text-book. The upper grades take up the study of *physics*, and not infrequently also *chemistry*. These studies are very elementary, but are pursued with the aid of simple and sometimes home-made apparatus. *Gymnastics:* Physical exercises are prescribed in the course, and no school is without suitable apparatus for regular exercise. *Manual training* for boys is not prescribed officially, but private efforts in this direction are greatly encouraged and even subsidized by the Government. Industrial education for girls consists in knitting, crocheting, embroidering, sewing, darning, cutting, fitting, and patching, and is found in every school.

What branches are taught in secondary schools, and in what years of the course, can best be seen from the four graphic charts published in the Report of 1888-89.

Diagram I. As regards language instruction, p. 173.

Diagram II. As regards history and geography, p. 174.

Diagram III. As regards arithmetic and mathematics, p. 175.

Diagram IV. As regards natural sciences, p. 176.

The language used in instruction in Prussian schools is German, except in the border districts where Polish, Danish, Lithuanian, and French are permitted besides German. The Government, however, makes efforts to suppress all foreign languages.

School management.—There is no undue prominence given to the memory in the schools of Prussia. Very little is learned by heart or by rote. The first object of the teacher is to make his pupils observe *things*, comprehend *facts*, and to lead them from stage to stage, so as to keep up an eager interest.

A daily programme is made by the principals of elementary schools and strictly adhered to. These programmes differ from those in use in American city schools only in this respect: lessons and recitations usually last from 40 to 50 minutes. This is not considered too long, because the teaching is almost always conducted according to the Socratic method, and consists of questions and answers. In the Prussian public elementary schools one teacher of a year's course teaches all the branches prescribed. In the secondary schools most teachers are specialists, teaching either languages, natural sciences, or accomplishments, such as drawing and music.

Examinations are rare in elementary schools and do not exceed three per annum. Rarely are pupils promoted according to the results of examination. The teacher's estimate is all-sufficient. Most examinations for promotion are oral, and are as a whole conducted in the presence of the parents and friends. They are really public reviews. In secondary schools examinations are more frequent and much more rigid. The one preceding graduation in classical schools is exceedingly rigid. This is to protect the universities from poorly-prepared students.

When we consider the fact that Prussia, with 30,000,000 inhabitants, has 357,912 pupils in secondary schools, it is obvious that some powerful stimulus to higher education must exist in that country. Mere love of learning would not adequately account for the high percentage of youths seeking a higher intellectual plane. The motive is found in the fact that by Government decree students who have passed through a six years' course of high school are entitled to a reduction of the term of their military service from three years to one year.

Ever since the establishment of schools in Germany the discipline has been strict. It is based upon the presumption that reverence for elders and obedience to the superiors of the children must be expected, and if wanting must be enforced. German children are usually docile and obedient; harsh measures are not often resorted to. No law exists prohibiting corporal punishment, but it is well understood that extreme cases are met and dealt with severely by the functionaries of the law.

Promotions in the elementary schools are very regular, because school attendance is regular, and also because many cities have special classes for mentally weak children, partly for the purpose of saving them for society; partly also in order to relieve schools of children who are apt to retard progress. In secondary schools, particularly in the classical schools, a great deal of sifting is being done. It is not a rare

occurrence that in a school of 500 to 600 students only a dozen graduate, that is, complete the entire course of 8 or 9 years.

School organization.—The Prussian schoolhouses are as a rule insufficient and poorly ventilated. During the last twenty years, however, great progress has been made in school architecture. The grounds are very frequently used as school gardens for the purpose of aiding the work in school, that is, object lessons, botany, floriculture, and arboriculture. The schoolrooms are small and mostly all overcrowded. Until recently nowhere were the pupils seated at single desks; usually long rows with settees attached are seen.

Compulsory attendance prescribed by law is between the ages of 6 (completed) and 14 (completed); in the rural districts 6 and 13. Confirmation in church signifies termination of the school course. Fines and even imprisonment await parents and guardians in cases of repeated absence of their children from school without valid excuse. Laws against child labor in factories are made unnecessary by this compulsory attendance law.

The hours in school are 8 to 12 and 2 to 4, or between 8 and 12 and 1 and 3, or 8 to 2. Generally a 6-hour day is the rule. In order to relieve the tension of long-protracted intellectual work, short recesses of 5, 10, and 15 minutes are arranged after each lesson. The school year begins at Easter, with a term of five weeks, then a vacation of one week at Whitsuntide is given. In the fall, that is, either in September or October, a harvest vacation of either three or four weeks closes the summer semester. At Christmas another vacation of one week is given, and from then until Easter the schools are in uninterrupted session. This gives six to seven weeks of vacation and at least forty-five weeks of school. Legal holidays are, however, more frequent than in America, since many church festivals are celebrated also as state festivals.

Libraries and museums.—It has been the custom for many years in Prussian schools to collect books for school libraries, hence a school without a few select books, both juvenile and professional, is rare. Secondary schools and universities are provided with large libraries, some of which have become famous. A collection of natural objects for objective teaching is found in almost all the schools of the Kingdom. In large cities the school authorities establish and maintain central museums.

The efforts to establish savings banks in schools have not been countenanced by the Government further than to encourage private enterprise.

Supplementary institutions.—The state maintains reform schools, asylums for the blind, deaf-mutes, and feeble-minded, all of which have the aim of elementary schools. Art, industrial, and trade schools, and other special schools, such as agricultural and forestry schools, are subsidized, and some even wholly maintained by the state. Large

cities maintain separate schools for dullards, asylums for vagrants, continuation schools and orphan asylums.

Besides these supplementary institutions, societies and institutes for scientific purposes aid the work of the schools. All classes and kinds of schools of a city are in intimate relation to the management of art academies, museums, zoölogical and botanical gardens, astronomical observatories, public libraries, gymnastic societies, and the theater, in fact, with every institution that in some degree may be important in assisting the work in school.

Memorable dates in the history of the Prussian people's or elementary schools.

- 1717. Royal order that parents should send their children to school.
- 1763. General school regulations, issued by Frederick the Great.
- 1794. Adoption of the Prussian "Landrecht" (code of laws), in which the schools found complete recognition: Part II, title 11, sections 217 and 218, referring to funds; title 12, sections 4 and 53, laws referring to the public schools; sections 3 and 8, referring to private schools.
- 1806. Beginning of reconstruction of all governmental institutions of the Kingdom after the disastrous defeat at Jena; general obligation to army service and school attendance.
- 1808. Queen Louise introduces Pestalozzi's principles.
- 1825. Cabinet order referring to compulsory attendance and discipline.
- 1833. Royal order concerning abolishment of tuition fees (only partially carried out until 1888).
- 1834. Cabinet order concerning supervision of schools.
- 1850. Adoption of the constitution. Articles 21 and 26, containing the famous sentence, "Science and the teaching of science are free."
- 1854. Three regulations (Muehler's) for elementary schools.
- 1872. General regulations (Falk's) for elementary schools.
- 1875. Vaccination law.
- 1882 and 1885. Laws regulating pensions for teachers and their widows and orphans.
- 1888. Laws contemplating the final abolition of tuition fees.

CHAPTER XIII.

BRIEF STATEMENT OF THE SCHOOL SYSTEM OF AUSTRIA.

INTRODUCTION.

The Empire of Austria-Hungary is sharply divided into two parts on all questions that do not pertain to the Empire, such as war, finance, etc., hence the matter of education is managed separately by Austria (Cisleithania) and Hungary (Transleithania). Each has its own school legislation and its own ministry of public instruction.

I.—THE SCHOOLS OF AUSTRIA.

Establishment and maintenance.—The public schools are established and maintained partly by the state and partly by the communities. It is a prerogative of the civil community to establish and maintain elementary schools; the state participates moderately in defraying the expenses for that purpose, but reserves the entire business of directing and supervising public instruction. The churches may establish elementary schools, but they can not participate in the state's subsidies until they comply with the legal requirements regarding course of study, professional preparation of teachers, etc. The Government, in its annual statistical reports concerning school statistics, refrains from stating the amounts spent for public education. The annual appropriations passed by Parliament allow the minister of public instruction \$8,307,774 for all kinds of public educational institutions, elementary and secondary schools, universities, technical and art schools, museums, and philanthropic institutions. Generally, this principle is adhered to by the state, to subsidize the highest institutions of learning most liberally, to share the cost of maintaining secondary schools with church and community, and to leave the burden of maintaining elementary schools almost entirely to the local or communal authorities. It is reasonable to compare Austria with Hungary, similar conditions having prevailed for more than a century in both countries. We find that the ratio of the state's participation in bearing the burden of expense for public education in Hungary in 1889-90 was 1.08 per cent for elementary, 24.2 per cent for secondary, and 67 per cent for higher education. While these ratios may not hold good for Austria, they will at least give an illustration of the state's policy.

In the Austrian public schools no distinctions are made with the pupils as regards their religious confessions. The schools are open to all, and are therefore common schools in the sense in which that term is employed with us. In Prussia it is the policy of the Government to separate the pupils of different religious confessions in separate elementary, but not to separate them in secondary schools. In Austria and Hungary, special teachers of religion for the elementary and secondary schools are employed; in Prussia this is done only in secondary schools, while religion is taught by the secular teachers in elementary schools. This is a very vital difference, and shows how much nearer the Austrian schools have come to our ideal of a common school. Private efforts in founding and supporting a variety of educational institutions, different in scope, character and aims, are more frequent in middle and higher than in elementary education, but all such institutions are encouraged by the Government, and when they have proven to be of abiding benefit to the community, the Government grants them a subsidy, and subsequently incorporates them into the state school system. If we study the statistical summary on p. 451 we see what a variety of special schools are found in Austria. The following table is a synopsis:

School statistics of Austria for 1889.

[Latest official report. Total population of Empire (Cisleithania) according to census of 1889, 23,895,833.]

	Ages.	Number of pupils.	Sex.	Number of teachers.	Attendance.
Infants' education, kindergärten.	2 to 6	Unknown.	Both sexes.....	Unknown.	Unknown.
Elementary education:					
Public (so-called people's schools including citizen's schools).	6 to 14	2,831,667	Boys..... 1,448,443 Girls..... 1,383,222	a 15,795 b 13,875	} Attendance, 87.3 per cent. c
Private (people's and citizen's schools).	6 to 14	106,908	Boys..... 52,466 Girls..... 54,442	Unknown.	
Total.....		2,938,575			
Secondary education:					
Gymnasias.....	10 to 19	52,959	Only boys.....	3,473	} Calculated to range between 90 and 95 per cent.
Realschulen.....	10 to 18	17,586	Only boys.....	1,371	
Total.....		70,545		4,844	
Higher education:					
Normal schools.....	18 to 20	9,415	Men..... 6,151 Women..... 3,264	972	} No data.
Universities.....	18 to 22	14,274	Only men.....	1,112	
Polytechnica.....	18 to 22	1,569	Only men.....	348	
Agricultural and art schools.	various ages.	758	Both sexes.....	115	
Theological seminaries.		2,317	Only men.....	244	
Total.....		28,333		2,791	
Special education: Various professional and industrial schools.	Various ages.	122,908	Both sexes, women in the majority.	8,678	No data.

a Secular. b Religious. c 10.9 per cent escaped enrollment.

A comparison of the numbers in column "sex" will show that Austria makes no provision for secondary education for girls, since the secondary institutions lead up to the universities and polytechnica which are closed to women. Girls who aim at a higher education than the elementary school offers attend various kinds of special schools and private citizens' or superior elementary schools. The proportion of female students (1 to 2) in the normal schools is much greater than in Prussia, where it is 1 to 10. While officially women are not matriculated as students in the universities, they are permitted to attend the lectures, but that does not admit them to the state examinations nor to the privileges arising from having attended a university and having graduated from it.

Administration and supervision.—The minister of public instruction, a member of the imperial cabinet, has the general direction and supervision of all educational institutions of the Empire. He is charged with watching over the execution of the laws, and to prepare such bills as will from time to time become necessary to amend the laws. The Empire is divided into crownlands, or, properly speaking, the Empire has grown to its present size by the acquisition on the part of the Crown of the following countries (hence called crownlands): Archduchies of Lower and Upper Austria, Kingdom of Bohemia, Margraviate Moravia, Duchy of Silesia, Archbishopric Salzburg, Duchy of Styria, Duchy of Carinthia, Duchy of Carnolia, County of Tyrol, Kingdom of Galicia,¹ County of Bukowina, and the coastland on the Adriatic. Their area and population vary considerably. At the head of the administrative affairs of each crownland stands a governor ("Statthalter") who has a cabinet of councilors for the different branches of administration, such as land office, judicial office, school department, etc. The head of the school department is the general superintendent of the crownland (Landes-Schulinspector). He is the organ of intercommunication between the minister and lower authorities. He also watches over the execution of orders issued by the supreme authorities of the crownland. Each crownland is divided into "Bezirke" or school districts, the schools of which are directed and supervised by a "Bezirks-schulrath" (board of supervisors of the district). These boards have chiefly to perform supervisory functions, and consist of professional teachers from all classes of the profession from elementary, secondary, and superior schools. They are nominated by the teachers of the district and appointed by higher school authorities. These district boards are the organs of intercommunication between higher and lower school authorities and courts of appeal in cases of disagreement between teachers and local boards. The districts are not synonymous with our school districts, but with our counties. Each of them has a number of local school districts with local school boards. The local districts are similar in size and number of inhabitants to our township and school

¹The imperial school law does not apply to Galicia.

districts. Some cities of importance are large enough to constitute Bezirke (counties), and in that case the elementary schools are all under the immediate direction of one local board, usually a committee of the city council. The burgomaster or mayor in that case is the highest local authority. In rural districts that authority is exercised by the chief functionary of the civil government. Thus it is seen that from the local authorities upward to the imperial government there is an ascending scale of administrative and directive as well as supervisory authorities.

The administration of secondary schools varies according to the nature of the school. If it is a State or city school, the authorities of the crownland or the city and the imperial government direct and supervise it; if it is a church school the church authorities do it, subject to the law which prescribes supervision; if it is a private or a secondary school maintained by societies or private individuals, the school must submit to the state's supervision or lose the benefits arising from the state's acknowledgment. It is the custom to give to each secondary school, even to state schools, a local board of trustees whose functions are executive, but in all cases the rector or principal is a member of this board. In a general way it may be said, the duties and functions of local school boards and boards of trustees are the same as such boards have with us, but all the schools stand under one and the same imperial law and the direction of the minister of instruction, who, in conformity with that law, defines the lines of the courses of study and determines the requirements for examination and promotion, etc.

The elementary or peoples' schools of Austria have little direct supervision, because the teachers in Austria must have acquired professional training before their application is confirmed by the authorities. Still there is a general supervision exercised by the state and a local supervision by the "Bezirksschulrath" (county board of supervisors). The candidates for these boards are professional teachers; they are nominated by the teachers of the county and appointed by the authorities of the crownland. It has been the policy to select for the office of "Bezirksschulrath" men who have won distinction in certain lines of duty, so that the full board should represent all branches of the courses of study. Thus, one member supervises mathematical, another scientific, a third linguistic studies. Local superintendents as we have them, who inspect the schools of all grades, and examine the progress made in all the branches, are not found in Austria, nor anywhere in German-speaking countries. Even in Prussia, where professional local superintendents (inspectors) are employed, these officials supervise only elementary schools. While the office of inspector in Prussia is in many cases a supplementary one, filled by normal school principals, clergymen, teachers of higher schools, or principals of middle schools, we find that in Austria the inspectors (members of the county board of supervisors) employ their whole time in the duties of their office. To

teachers who are nominated by their colleagues, and appointed by higher authorities to the office of county board of supervisors, it means a promotion in rank and salary; but their duties are far from being pleasant, since they are placed between the upper and lower millstones, *i. e.*, the crownland school authorities and the local school boards, and having less directive power than the local boards, a clash of authorities occurs frequently.

These boards of supervisors report to the higher authorities, aid the teachers in their professional advancement, and stimulate the local boards to action where inactivity is more to the liking of the people.

Teachers.—The professional preparation of teachers in Austria is the source of strength of the people's or elementary schools. The first attempts of the Government at improving the schools were directed at establishing normal schools.

In 1889 Austria had 69 normal schools, with 972 professors and 9,415 students. Forty-two of these schools were for men, 39 for women. In 1889 there were, however, still 5.3 per cent of the teachers without a diploma, and 10.1 per cent who held only a diploma issued by local authorities. The course of study in normal schools in Austria is one of two and three years. It embraces a thorough review of the common branches, the so-called high-school branches, theoretical and practical instruction in instrumental music, drawing, gymnastics, and pedagogy. (which includes history of education, elementary psychology, theory and practice of teaching). In 8 of these schools two languages are spoken; in 39, German is spoken exclusively; in 12, Bohemian; in 6, Polish; in 2, Italian; in 2, Servian exclusively.

Appointment and position.—The appointment of teachers is regulated by the law of May 14, 1869, which says: "The provisional appointment of teachers is made by the county board of supervisors (*Bezirksschulrath*), but the definite appointment by the school authorities of the crownland (*Landesschulbehörde*) upon nomination by those authorities who maintain the school. Promotions to higher rates of salaries are made by the school authorities of the crownland. Hence the law prescribes in the main the same principle adhered to in Prussia, that the local authorities choose the teachers and the Government confirms or rejects the appointment. The legal and social position of teachers in Austria is well defined by the law; he is an officer of the state; his minimum salary is guaranteed by the state (or crownland); his annual increase in salary depends upon the financial ability of the locality, and varies in different cities and districts; he receives a pension after a certain number of years of service, which pension is the same as given other officers of the state receiving a like amount of salary. Widows and orphans of teachers are also entitled to support. Coöperative societies enable the teachers of cities to save something out of their slender income, and they are resorted to frequently.

Salaries.—It is impossible to state the amount of salary paid to

teachers in Austria for reasons previously mentioned. Only little information has been received, but enough to indicate that the salaries are much lower than in this country and also lower than those paid in Germany and France. While in large cities, such as Vienna, the teachers enjoy comparatively good incomes, in far remote crownlands like Tyrol, Bukowina, etc., they live in great want and poverty. Advertisements of local boards in Tyrol, are published, not unfrequently calling for teachers at salaries of \$79 a year, and even less for women. The city of Vienna has recently adopted a new schedule of salaries for the teachers of middle and elementary schools, which is very instructive since it affords a standard of comparison with salaries paid in other large cities. It will be found on page 428. The minimum salary of teachers according to this new schedule ranges between \$285.60 and \$392.70; of principals, between \$428.40 and \$545.50; the maximum salaries (including annual increases) of teachers range between \$392.70 and \$731.85; of principals, between \$464.10 and \$928.20.

Course of study.—The course of study in purely elementary schools embraces: Religion, reading and writing (the mother tongue, the medium of instruction), arithmetic and elementary geometry, geography, and history, with special reference to Austria, elementary natural history and science, drawing, singing, industrial handiwork for girls, and gymnastics (obligatory for boys, but optional for girls). The extent to which these branches are taught is determined by the grade which the school has reached. If fully graded, as schools generally are in cities, much more is expected than in ungraded country schools. The timetables used in the different schools, graded, partly graded, and fully graded, are prescribed by the minister of instruction.

For superior elementary schools, so-called "bürger" or citizen's schools, the branches prescribed by law are, religion, language (composition of business letters of various kinds), geography, and history (with special reference to Austria and its constitution), natural history, natural science, arithmetic and simple bookkeeping, geometry and geometrical construction, free-hand drawing, penmanship, singing, industrial handiwork for girls, gymnastics (obligatory for boys, optional for girls). In schools where the German language is not the medium of instruction it is made a branch of study.

These superior elementary schools consist of three grades or classes, and receive their pupils from the primary elementary schools at the age of 11 or 12 years. In primary elementary schools the sexes are taught together in the same rooms; in superior elementary schools the sexes are separated.

The text-books used in all elementary schools are chosen by the teachers' conference of a district, but the selection is subject to the approval of the school authorities of the crownland, the action of which in turn is subject to the approval of the minister.

The teachers in Austria have the greatest possible liberty in the

selection of the methods of teaching. No inspector prescribes methods, but in the conference of teachers in the district (Bezirk) the inspector (Schulrath) suggests improvements where he thinks them necessary.

Branches of study.—Religion: For this branch special teachers, usually clergymen, are employed (Austria had in 1889, 45,705 secular and 13,875 clerical teachers in elementary schools); the law leaves the amount of matter to be learned to the "religious denominations." *Reading, writing, and languages:* The extent of these branches is the usual one, namely, familiarity with the vernacular, a limited knowledge of German literature, and some skill in oral and written expression of thought. *Arithmetic:* In this branch less work is done than in American schools, percentage and interest is all that is attempted of business rules; but mensuration and geometrical construction is taught in close connection with elementary geometry. *Singing:* This consists chiefly in the singing of hymns and popular airs. Two and three part music is quite frequently heard even in remote village schools. In Bohemia and other parts of the Empire many children learn instrumental music in school also, chiefly the violin. *Geography:* This study is limited to topographical and political geography. Austria is treated with more thoroughness than other countries, but when *History* is taken up the geography of Europe and of other continents comes in for a share of attention. For history the law prescribes that home history and the constitution should claim special attention. No text-books are used for geography and history, except a small atlas. *Natural history and science* (in one word Natur-Kunde or knowledge of nature): These studies are very elementary, and limited to object lessons in school gardens and primitive laboratories with home-made apparatus. Gymnastics is obligatory for boys, but optional for girls, while *industrial handiwork* is obligatory for girls. *Drawing* is free-hand, except so far as connected with geometrical construction. *Manual training* for boys is not prescribed officially, but private efforts in this direction are greatly encouraged and even subsidized by the Government. All these branches are extended in scope in the superior elementary schools, composition in German and natural science especially.

What branches are taught in the secondary schools and in what years of the course can best be seen from the four graphic charts offered in the report of this Bureau of 1889 (see pages 173-176). The secondary schools, Gymnasia and Realschulen, of central Europe vary but slightly in the essential features of their courses of study. There is only one essential difference between the Austrian and Hungarian secondary schools; it is this, that Hungary does not maintain that hybrid form of secondary schools called Realgymnasium; it has only Gymnasia and Realschulen.

The language used as medium of instruction in Austrian elementary schools is German in 42.4 per cent of the schools, Bohemian in 24.8 per cent, Polish in 9.6 per cent, Ruthenian in 10.2 per cent, Slavonian in

3.2 per cent, Italian in 4.9 per cent, Servian in 1.8 per cent, Roumanian in 0.5 per cent. Mixed schools in which several languages are spoken claim 2.6 per cent of the whole number.

School management.—The ministerial interpretation of the law of 1869, published in 1883, contains the following points concerning the management and courses of study:

Section 1 of the minister's regulations says: All courses of study must be submitted to the school authorities of the crown land. * * * During the first three years of the course much attention is to be bestowed upon exercises in language, reading, and orthography and mental arithmetic. * * * In selecting matter for natural history and science, geography and history, the measure of juvenile comprehension and normal conditions of life should be carefully considered. * * * In dividing the matter for the different grades of a school, the ability of the average pupil should be considered. * * * In section 4 the following points are brought out: In Bürger (citizens' or superior elementary) schools the sexes are to be separated. * * * The concentric method of dividing the matter of instruction is to be followed. * * * The maximum number of hours of instruction per week is fixed at 30. * * * The number of lessons, as well as the amount of matter to be learned in the different branches, must always depend upon special practical needs of localities where either certain industrial conditions demand greater efforts in drawing, chemistry, etc., or where agricultural pursuits require more attention to natural history and physics. Hence school gardens and tree nurseries are to be established in rural districts, laboratories and drawing rooms in cities. * * * Every course of study must contain a statement of the number of hours necessary for doing home lessons in each grade of school.

From the foregoing quotations it may be seen that all legal and ministerial regulations state only principles to be followed and prescribe rules of administration and management in outlines only; it is left to the lower authorities to carry out the law in harmony with local needs.

Examinations for promotions are rare in Austrian elementary schools; the estimate of the class teacher is usually sufficient. Most examinations are oral and consist in public reviews, commonly instituted to establish a closer connection between home and schools. In secondary schools, that is, schools which lead up to universities and polytechnica, an examination for promotion is held every year. The final examination is both oral and in writing. All final examinations are conducted by the faculties in presence of higher school authorities, such as "Landes-Sculrath" (general superintendent of the crown land) or his deputy.

In Austria the same rule that prevails in Prussia is found, namely that graduation from, or a six years' course in, a secondary school, reduces the time of military service of a student to one year.

The discipline in Austrian schools does not materially differ from that of German schools. Corporal punishment is not forbidden. The law allows the teacher the same mode of treatment which it allows the father. Harsh measures are not resorted to very frequently.

School organization.—The law of 1869, and its interpretation on the part of the minister, issued in 1883, contain a number of interesting features. Section 11 says: "If within three successive years the number of pupils in elementary schools has reached 80 a second teacher, and if the number reaches 160 a third teacher must be employed, and so on. In half-day schools 100 pupils in two sections are the limit. Section 13 says: For ungraded schools (schools of one room and less than 80 pupils) a teacher must be employed. If two or three are needed one of them may temporarily be an assistant. In graded schools of 5 or more classes two temporary assistants may be employed. The other teachers are associates, and the first or head teacher is responsible for the order of the building and the reports, but not for the teaching of his associates. The head teacher of a *Bürger* or citizens' school bears the title rector or director. If the *Bürgerschule* is fully graded, that is, if it has 5 elementary and 3 higher elementary classes, it bears the name people's and citizens' school.

Of late years Austria has made great progress in school architecture. The school buildings in cities are remarkably beautiful and commodious. Vienna set a good example for other parts of the Empire in its school buildings, which are the pride of the people. New buildings are usually erected of sandstone and contain, beside the necessary class rooms and spacious corridors, a gymnastic hall. If viewed in the light of American custom they seem overcrowded; but, then, crowded school-rooms are the rule in central Europe. In Prussia the normal number of pupils is 75; in Saxony, 70; in Austria, 80; except in half-day schools, where 50 is the number in each class.

Single desks are not found in Austria (eyewitnesses report this), but the children sit on long settees attached to desks. (See *Klassen's Schulgebäude*.)

Compulsory attendance, prescribed by law, is between the ages of 6 and 14. This law is executed by the local authorities, who do not always act promptly, hence, nearly 11 per cent of the school population of the Empire, especially in Slavic crown lands, escape enrollment. Particulars concerning the execution of the law may be found on page 429. The supervisory authorities have the right to excuse the children of needy parents for half a day, or for two days in the week, and during the last two years of the course they may release the pupils for a half or even a whole year from attending. Confirmation in church does not as in Prussia signify the termination of the school course, but the completion of the course, which may be effected at 13 years of age. The hours are variously fixed at from 8 to 12 and 2 to 4, or from 8 to 12 and 1 to 3, or from 8 to 1 and 3 to 4, or from 8 to 2. In half-day

schools the hours are from 8 to 12 and 1 to 5. All-day schools have 6, half-day schools 4 hours study. The vacations vary little from those in Germany: 1 week at Christmas, 1 week at Easter, 1 week at Whitsuntide, 3 or 4 weeks at Harvest time; rarely do they amount to more than 6 or 7 weeks a year.

Equipment of schools.—The elementary schools all have at least a nucleus of a library, a primitive collection of objects for natural history, and some apparatus for physics. Rural schools all have a school garden, while city schools are provided with facilities for the promotion of studies that will aid industrial city life.

Supplementary institutions.—The state maintains reform schools, asylums for the blind, deaf-mutes, and feeble-minded, all of which have the character of philanthropic institutions, and the education offered in them does not go beyond the limits and purposes of elementary education, if at all it reaches that limit. Austria maintains also a number of special schools, some wholly, some partly professional. These have grown out of the needs of the localities in which they are found and were originally founded by private enterprise. Many of them obtain governmental aid. These schools are classed under the following sub-heads: Commercial, trade, music, agricultural, mining, veterinary, nautical, female industrial, and other special schools. This group of schools is by no means small, it has 8,678 teachers and professors and 122,968 students and pupils.

See also "Memorable dates in the history of Austrian Schools," page 426 of this Report.

CHAPTER XIV.

THE EDUCATIONAL SYSTEM OF NORWAY.¹

[Constitutional monarchy; area, 123,205 square miles; population (at close of 1880), 1,913,000. Capital, Christiania; population, 130,027, January, 1886. Minister of Education and Ecclesiastical Affairs, Jakob Aall Bonnevie,² appointed July 12, 1889.³]

INTRODUCTORY SKETCH.

Norway, which had been for some time an independent country, was reunited to Denmark and to Sweden at the close of the fourteenth century by a treaty signed at Calmar in 1397. Insurmountable obstacles to such a union were soon encountered, and in 1527 a definite severing of the bond resulted, which left Norway dependent upon Denmark. In 1814 Norway recovered a certain degree of autonomy. Separated from Denmark by the treaty of Vienna, she became a constitutional state united to Sweden through the person of her sovereign, but possessing a national parliament and with the power of legislative action. Of these three Scandinavian countries Norway is the one where the institutions are the most democratic. The title of noble was abolished in 1821. The state religion is Lutheran, although formerly the Catholics were in the ascendancy, and it may be stated that religion is a main element in the schools. The character and the speech of the Norwegian people resemble those of the Swedes and Danes. By the peasants, and outside the large towns in general, are spoken various dialects or corruptions of the old Norse, which was common up to the fourteenth century to all the Scandinavian race. The language of literature and of society is the Danish, a natural outgrowth of the long domination of Denmark over that country.

¹ Prepared by Frances Graham French, specialist in the school systems of northern and eastern Europe.

² Succeeded the Liberal Sverdrup in summer of 1889. Mr. Bonnevie is counted among the moderates of the Right Wing of the Storting. He was born in 1838; passed the student examination in 1856; the Realcandidats examination in 1863; then became a teacher in the cathedral schools of Christiania and Christiansand; in 1872 a school director in Trondhjems-stift; sent as deputy by Trondhjem-Levanger district in 1880. Is a teacher by profession.

³ Mr. Bonnevie was succeeded on March 6, 1891, by V. A. Wexelsen.

The constitution of Norway, called the Grundlov, dates from November 4, 1814, after the reunion of that country with Sweden, with modifications at different dates to 1889. This reunion does not prevent Norway's preserving its own organization and refusing to submit to any laws except those made by itself. One king governs the two countries, however; the foreign relations are the same, and the diplomatic corps is credited to both countries. In other matters Norway preserves its own autonomy. The legislative power is vested in the Storthing, which is divided into two houses, the Lagthing and the Odelthing, the former being composed of one-fourth of the members of the Storthing, the latter of three-fourths of the same. The Storthing enacts or repeals laws, imposes taxes, supervises the financial affairs of the government, voting amounts required for expenditure, etc. All proposed laws are first introduced in the Odelthing and then pass to the Lagthing.

The executive is represented by the King, who is aided by a council of state, composed of two ministers and at least seven councilors. They are entitled to be present in the Storthing and to take part in the discussions, but not to vote. The King has not the power to dissolve the Storthing, only to veto its decisions. When the King leaves the country the minister and two councilors leave with him; the other councilors act with a lieutenant-general, or (if he be a prince royal), a vice-king appointed by the King, but who may not be a Norwegian. He resides at Christiania and submits all matters to the King. Affairs common to both countries are decided in Sweden, the Norwegian members having the power of voting.¹

Norway is divided into 20 counties, *i. e.*, the towns of Christiania and Bergen and 18 counties or Amt, each of these governed by an Amtmand or chief executive functionary. These Amt are subdivided into 39 towns and 56 Fogderier, the latter comprising 22 Ladesteder, or ports, and 494 Herreder, or rural communes, which are mostly parishes or wards. The government of the Herred is vested in a council and a body of representatives. The three to nine Formændene, or councilors, are elected from the different wards of the commune. The representatives who vote the expenditure of the Herred are three times as many as the councilors. These bodies elect conjointly every year a chairman and deputy chairman from among the Formændene. All the chairmen of an Amt form, with the Amtmand and the Fogder, or sheriffs, the Amtsformandskab, or county diet, which holds an annual meeting to prepare the county budget. The chief functionary of the county is chairman of this body. The towns and ports form 58 communes, also governed by a council (4 to 12 members; 15 in Christiania) and by representatives, who outnumber the councilors threefold. The members of both local governing bodies are elected by voters for the Storthing in towns and rural communes.

¹ In the fall of 1891 the Norwegians were earnestly engaged in discussing the possibility of greater independence, especially in diplomatic and commercial relations.

The administrative, ecclesiastical, and educational authorities are united in their efforts to promote education in Norway. The Storting has given material aid since the establishment of the independence of Norway in 1814. The chief official of each of the counties and the bishop of each diocese are members of the board of such divisions, which board looks after educational interests. The municipal council votes on the school budget, and some of its members belong to the district school board, while a prominent member of each local school committee is a clergyman.

DISTINCTIVE FEATURES OF THE SCHOOL SYSTEM PRIOR TO SCHOOL LAW OF 1889.¹

During the Danish domination very little was done for the instruction of the people. After the formation of the constitution in 1814 the Norwegian politicians commenced to discuss the organization of elementary schools most earnestly, but it is stated that the present school system, which is an establishment of the state, is based upon a decree of 1736, by which no child could be admitted to confirmation unless it had frequented a school and had been instructed in the principal dogmas of Christianity. This was followed by a decree of 1739, which, however, did not take the topography of the country into consideration, for in Norway, as in Sweden, there exist many ambulatory schools, and modifications were made necessary in 1741. By these laws instruction in reading and religion was made obligatory for all children from 7 years of age to that of confirmation, which generally takes place in the fifteenth year. The organization of the university dates from 1824, although it was founded in 1811, while the most comprehensive law for all educational purposes was that of 1827, followed, however, by a law of 1848, applying particularly to city schools. These laws were replaced in part by one of May 16, 1860, which, with modifications in 1869, appertaining to higher grade educational institutions, and with other modifications in 1873, 1878, and 1881, were in force to date of June, 1889, when a new law was promulgated.

According to the earlier laws the elementary schools, *Almueskoler*, were divided into rural and urban, and in each town there was to be at least one school organized according to the law of 1848, while in rural districts the law of May 16, 1860, governed the school

¹The latest statistics for Norway are for the year 1888, hence a general survey of the school system prior to that date seems advisable. Under each heading or subdivision of the school system a short statement is presented, which statement gives the status of that subdivision prior to the year 1888, as showing the basis on which the statements were founded. Each of these statements is followed by points of the new law which apply to that special subdivision, so that any changes may be made clear to the reader. The new law, which goes into effect during a three-year period from July, 1889, in urban and five in rural districts, will form the basis of future presentations of education in Norway.

organization. Each rural district, *Herred*, was formed of one or more school communes, *Skolekommuner*, and again subdivided into circles or *Skolekredse*, the size of which is determined by the communal school commission, *Skolekommission*—it may be stated here that a school district averages from twelve to fourteen circles. Each circle was required to have an elementary school, *Kredskole*, or, if the distances were too great for the children to come, an ambulatory school, *Omgangskole*, was carried on. There were formerly great numbers of these, but by degrees they have been blended with the stationary schools. In localities where it was possible these lower grade schools were supplemented by a higher elementary school, *höiere Almueskole*, which might be maintained by several circles in common. The laws of 1848 and 1860 also governed the establishment of private schools which could only be opened by persons of good moral character, who pledged themselves to conform to the regulations for school programmes, etc., laid down by the school authorities. Among the private schools are about 70 schools for girls, which schools have, however, no special plan of organization, and consequently prominent educators are discussing the propriety of admitting girls to the schools established for boys, so as to give both sexes equal privileges. There are also infant schools which, however, have no connection with the public-school system. For forty years the city of Christiania has supported four of these asylums. The directresses are chosen by the municipality and have no specific regulations laid down for them, but can teach the children as they please. Each of the six dioceses into which Norway is divided was to have a state normal school, *Seminarium*, for the education of teachers, and by the law of May 16, 1860, normal schools of a lesser grade, *Laererskoler*, were to be attached to the higher elementary schools, or become the highest class of the *Kredskole*. Teachers in the public schools were presumed to have passed a normal-school examination or the equivalent of the same elsewhere. The appointments to many of the higher places came direct from the King or the department of education, while the school commission, diocesan board of directors, or bishops appointed teachers in the lower grade schools.

Secondary schools, also established by the state, include middle schools, *kommunale Middelskoler*, and Gymnasia, which are subdivided into Latin and real gymnasia, *Latin og Realskoler*, and there are also private schools of a secondary grade.

The University at Christiania, with its five faculties, and the special schools for philological studies, physical and mathematical studies, mining and forestry schools, industrial and commercial schools, the agricultural schools in almost every county, the higher agricultural schools (*höiere Landboiskole*), navigation schools, military high school, military and naval school, and the polytechnic, etc., serve to complete the school system.

The general control of the educational system is vested in the department of ecclesiastical affairs and public instruction, *Kirke og Undervisnings-Departementet* (law, July 12, 1848, and May 16, 1860), which is required to furnish a report every third year to the King and Stortling as to the condition of educational affairs throughout the kingdom.

The ecclesiastical authorities of the seventy-seven deaneries into which Norway is divided are by law invested with the higher inspection of schools and the control of school committees. The deans are accountable to the diocesan director. Each of the six dioceses has its director. This *Stiftsdirektion* includes the bishop, the chief officer of the diocese, and the school inspector, who is appointed by the King and paid by the state. Each of these higher school boards is required to send in an annual report to the department of education.

Each county, or *Amt*, has for local supervision its council, which acts as a county school board, meeting annually and having among its members the chairmen of all the municipal councils in the county. The immediate supervision of the schools is vested in a school commission (*Skolekommission*) in each city or district, which commission includes as members the pastors and vicars of the parish, a member of the municipal council and delegates of the communal council. Each school district (the ordinary school district in the country has limits similar to those of the municipal districts) is governed by dual authority, by the school committee, which is purely administrative, and by the municipal council, which has charge of the school fund.

Elementary education is generally spoken of as gratuitous, but the local school board with the consent of the municipal council can exact a small school fee from parents whose children attend more than twelve weeks. The parents if able also furnish text books and school material to their children. These pay schools and free schools have no distinct divisions; the paying pupils, which are few in number, may be found in the school in the morning hours, the free pupils in the afternoon. The schools are maintained by district, county, and state funds, the elementary schools being supported by a district school fund derived from interest funds, voluntary gifts, fines, and contributions from the state, etc. It may be stated that each municipal district forms a school district. From this common fund are paid the expenses of building, repair and hire of school-houses. Each circle of a district must pay for heating and lighting of the school and for the lodging and food of the teacher during the school term. Each of the twenty counties, or *Amt*, into which Norway is divided, has its school fund out of which (law of May 16, 1860) are paid the increase of salary for teachers (teachers' salaries are granted by the school districts, the minimum being fixed by the council according to the number of weeks school is kept open), contributions for higher schools and for work schools, for erection of school-houses and purchase of land for school teachers, for promotion of education in poor parishes, and for compensation to schoolmasters

who fit pupils to be teachers. School taxes imposed by the council are assessed in proportion to the relative value of the estate. City schools are supported entirely by the municipal district and receive no aid from the state. Secondary schools are maintained by the municipality or by funds which have accrued to the department of public instruction by the sale of lands belonging to the church. In certain cases the Latin schools have funds of their own, but the most of them depend upon state and municipality. Normal schools are established and maintained by the government. The university is maintained by the state or by its own funds, the student having no fees to pay. The agricultural schools are supported by state and district funds.

Summarized, the laws of 1860, 1869, 1878, and 1881 for public elementary schools in rural districts, and 1848 and 1869 for city or town schools, indicate a school system which is compulsory for at least a minimum of twelve weeks in the country for all children from eight years to confirmation, and seven years to confirmation in the town; special instruction being provided for backward or vagrant children. In towns all children are instructed in stationary schools; in many rural districts ambulatory schools exist. The schools are mixed in the country, but coeducation is not general in towns, although girls have permission to enter higher grade elementary schools; continuation schools and night schools aid in the education of the people, but attendance is not compulsory, the small fees in these schools aid in defraying expenses; the laws provide for the curriculum of study in the elementary schools, that of the city being more extensive than in rural schools; religious instruction—Evangelical Lutheran—being obligatory except for Dissenters, statutory provision as to extent holding good for the higher grade schools only; promotions occur from class to class after examination each summer; elementary instruction is in general gratuitous, secondary not entirely so, in the public high schools the fees for the parents varying from 80 to 140 crowns (\$21 to \$37) per annum; elementary schools are maintained by public funds and voluntary contributions, the expenses being paid directly from the Government, the county treasury, and the locality—the higher grade schools (grammar) by the locality, with Government subsidy; cost of elementary schools per pupil is about 9 to 10 crowns in the country (\$2.68) to 24 crowns (\$6.53) in the city; teachers of elementary schools in the country are appointed by the school commission, for the lower elementary by the diocesan board of directors, in the towns by the bishop, in the higher grades by the king or by the ecclesiastical department—they are supposed to be graduates of normal schools or to have passed an equivalent examination; salaries vary from 800 crowns to 3,700 crowns (\$214 to \$991) for men in town schools, women 400 to 1,000 crowns (\$107 to \$268); in the country the average is \$190; principals of higher grade schools receive as high as \$1,554, with house rent free; supervision of schools is exercised in general by the Department of Educa-

tion, which is a branch of the Ministry of Ecclesiastical Affairs; those who report as to immediate supervision are the bishops and school directors of each diocese, forming with the civil governor a diocesan board of directors, the school commission, local boards, and district inspectors.

PRESENT STATUS OF EDUCATION.¹

Such are the main features of the Norwegian school system to date of 1889. On June 26 of that year a new school law was promulgated which will be enforced by degrees. The limit is a three years' period in cities and a five years' period (following the date of July, 1889) in rural districts, or, if in certain communities insurmountable difficulties occur, still another five years' period will be allowed. The principal features of the school law of January 26, 1889, are here presented for both city and rural schools. It may be stated, however, that considerable opposition to many of its provisions has been developed, and it is a question if certain modifications may not be made from time to time as the necessity occurs. The provisions provoking the most discussion are, the leaving the arrangement of the time-tables and plan of instruction to the local authorities, the appointment of elementary teachers by local boards, and a few minor points which are susceptible of different interpretations. The requirement that a certain minority of the voters of each district meet for the election of boards of inspectors has had to be given up owing to the opposition developed.

City schools.—According to this law each town is to have a sufficient number of elementary schools for all children needing an education. Each elementary school is to be in three divisions, the first for children from 7 to 10 years of age, the second for those 10 to 12 years of age, the third for those 12 to 14 years of age. The limit of school age is from 6½ to 15 years of age, and all children are to receive seven years' gratuitous schooling unless they are mentally or physically disabled, have some contagious disease, or belong to the incorrigible class. For such children special schools are established, the parents being called upon to pay in part for the instruction given. Classes in the elementary grades of town-schools are not to exceed 40 pupils in number although, if economy requires it, the limit may be extended to 50 pupils. For the first, or lowest division, 24 hours a week instruction in the different branches is to be the limit, and this may be reduced to 18 hours a week if the school board report to the municipal authorities that such a shortening of hours is advisable. The limits are therefore 18 to 24 hours. In the second division the weekly limit of study hours is assigned by the municipal authorities according to the suggestion of the school board. The third, or highest division, which depends more directly upon the school board, is allowed more latitude in regard to hours of study, reports in regard to such hours being made from time

¹ See note under Distinctive Features of the School System, p. 477.

to time during the year. If classes are formed for any special study, the hours are not to exceed 24 each week. If, however, there are optional studies allowed by the municipal authorities, these must in no wise interfere with the ordinary branches of elementary education, and the combined hours of study are not to exceed 30 hours a week. Optional studies may include foreign languages.

The school vacations cover 12 weeks throughout the year although that limit may be extended to 16 weeks if the authorities so determine. If the parents are unable to furnish text-books for their children the school board may do so. Parents neglecting to send their children to school after due notification is given them will be fined from 1 to 25 crowns (26.8 cents to \$6.50). The head of any firm employing children between 6½ and 15 years of age is required to see that they attend school during the hours set apart for such instruction or pay 100 crowns (\$26.80). Funds accruing from fines, or from the fees required of parents when the children need special instruction, are to be handed over to the municipal authorities. Each elementary school must have at least one male teacher and at least one female teacher. Persons who desire to open private schools for pupils under 15 years of age must so inform the school board of the town; in default of this a fine of 50 crowns (\$13.40) is to be paid. If the person desiring such position is not of high moral character, the school board can forbid his teaching any pupil under 15 years of age. If such a private school teacher continues to teach such pupils, the school board is at liberty to withdraw them from the school and place them in the public school. The teacher of a private school is required to give the school board whatever information it desires in regard to the school or pay from 5 to 25 crowns (\$1.34 to \$6.70) each week.

Each town must have a school board to look after the interests of its schools and to report as to the funds required for the management of the schools. There is also a committee of inspection to watch over a group of schools, while the teachers form a school council to discuss school needs, etc. The school board and council consult together. The bishop and dean watch over the religious instruction in the schools. Then there are school superintendents who form a board of higher inspection, and jaunt about to take cognizance of school matters throughout the country. They report annually to the chief of the department of education. The municipal council and local school boards (law of June, 1889, with modifications) have the power of regulating the hours of school and the plan of instruction in the two divisions of the elementary grades, but the minister of education and the school inspectors of the six dioceses have formulated a model plan for the guidance of these local officials. By this same law the appointment of elementary school teachers is intrusted to the local boards, but the school director can annul these appointments if, through the appointment of relatives, etc., they savor too much of favoritism. The municipal council and

school board are also given the power of approval of plans for new school buildings, but prior to a decision being reached the local board of health, or committee on sanitation, and the higher school authorities (probably those of the diocese) are expected to express their opinions in regard to the plan submitted. The board of health must look after the sanitary condition of school buildings and condemn them if unhealthy. If sufficient funds are voted by the municipal council, a physician is to keep watch over the hygienic conditions in the schools of the district over which appointed. The new law does not make the financial basis for city schools especially clear, but it would seem as though the older laws, by which the maintenance of city schools was left entirely to the municipal district, still held good. In all matters appertaining to the control and maintenance of city or town schools there are direct consultations with the municipal authorities. As far as the salaries of teachers are concerned, the city authorities receive at the close of each semester one-fourth of the amount of salary paid out. The schools of the city receive from the municipal school budget whatever is necessary to cover the expenses of elementary schools beyond the amount of the governmental subsidy and such other funds as have been turned in from other sources.

For more detailed account as to teachers, finances, supervision, etc., see under appropriate heads below.

Rural schools.—The law of June 26, 1889, as it applies to rural schools is as follows: Each commune is to have a sufficient number for the education of all children between 7 and 14 years of age. The list prepared annually to contain the names of all children between 6 and 15 years of age in each school circle, and whether they belong to public or private schools. Annexed to these elementary communal schools are one or more continuation schools for children between 14 and 18 years of age, the special aim of these schools being, as the name indicates, to consolidate and enlarge upon the instruction given in the elementary grades. Each commune is to be divided into school districts, and each of these districts is to have an elementary school of two divisions, *i. e.*, first or lower division for pupils of 7 to 10 years of age, and a second division for children from 10 to 14 years. If the parents reside at too great a distance from each other, this lower division may again be subdivided, or there may be an annexation to the schools of other districts, if it is more convenient for small children. Such subdivision or annexation is to be referred by the school board to the administration of the commune, and its decision again communicated to the board of higher inspection and to the school board which refers it to the minister of education. The separate classes of these divisions are not to have more than 35 pupils, or at the most 45 pupils. If there are fewer than 35 pupils in the school a consolidation of divisions may be made.

The length of school year for each division is 12 weeks, but, if the

school authorities so decide, this may be extended to 15 weeks. The number of hours of study each week is 36 for the higher division and 30 for the little folks. If the school has fewer than 35 pupils there may be a consolidation of the two divisions during 6 weeks, and a separation for 6 weeks schooling, or there may be a reduction to 10 weeks of school for the two divisions taught separately. If there are only 20 pupils they may be taught together. If there are only 12 pupils, 9 weeks a year may be the maximum of instruction. Special classes may be formed for backward children, the parents or guardians to pay for such instruction, the school board to see that such children are withdrawn from the public schools if they are not in condition to benefit by the instruction given them. Optional courses, which are not to exceed 6 weeks a year for each class, may be formed to carry on a desired course of elementary studies. Continuation schools formed in a commune, or in one or more rural communes united together, may be divided into one or more classes. Special regulations govern these schools. All children of the commune have the right to gratuitous instruction during a seven-year period, unless they are exempt by reason of some infirmity or of the pernicious influence, which, if incorrigible, they may exert over other children. In such a case schools must be established for them where they will not affect the moral character of other children. Absence, unless for good and sufficient reason, causes reprimand, a note to the parents; and further neglect, a fine of from 1 to 25 crowns (26.8 cents to \$6.70). The employers of children engaged in industrial pursuits are to see that they have the proper schooling or else pay a fine which may amount to \$26.80. In case of poverty of the parents the school board may furnish text-books and even clothing to children so that they can have school privileges.

Any person desiring to open a private school for children under 15 years of age will be fined 50 crowns (\$13.40) if he does so without informing the authorities. If the person is not of high moral character the school board may forbid his keeping a private school. If the children are kept in such school the parents may be notified to withdraw them, or the school board may send them to the public schools.

If the information desired by the school board of the heads of such private schools is not forthcoming, a fine of from 5 to 25 crowns (\$1.34 to \$6.70) may be demanded in weekly payments.

No religious text-books can be employed other than those authorized by the King. Other text-books can only be employed if they contain nothing contrary to the laws or the religion of the state. Before the school board can take any action relative to the introduction of a text-book the superintendents should be consulted. If higher tribunals have to be called upon in regard to the use of text-books, the board of higher inspection or superintendents can prevent their use until the matter is decided. Instruction must be given in the Norwegian language. In the diocese of Tromsøe the Lap and Finnish tongues may be employed

as auxiliaries. The text-books of those languages may also be employed side by side with the Norwegian text-books. If the school board decides that corporal punishment is allowable, it can only take place in the presence of a member of the committee of inspection, and never upon girls over 10 years of age. It may be stated here that more stress is laid upon the matter of corporal punishment in Norway than in the other Scandinavian divisions. For instance, in 1882, among the instructions for teachers laid down by the diocesan board was this one: If any child shows a lack of respect for his teacher, or is obstinate in demeanor, he may receive corporal punishment, but this can only take place by consent of the principal of the school, and must not result in injury to the pupil. The proprieties must also be observed in said punishment. When a girl above the fourth class deserves punishment she must not be struck by one of the masters, but by a female teacher, in the presence of and with the consent of the directress of the school.

Each commune has a school board to watch over the interests of the elementary and continuation schools. There is also a committee of inspection, which reports to the school board as to discipline, absenteeism, the whereabouts of ambulatory schools, etc. The bishop and dean have religious instruction in charge. A superintendent has general oversight of the county schools and he participates in the meetings of the school boards and in the discussions of school affairs by the communal authorities.

Every public functionary is expected to aid the school board, the school administration of the department, and the supervisors or board of higher inspection.

For the maintenance of schools a commune may be divided into several school communes and the obligations and expenditures of elementary schools shall be at the charge of the school commune.

If a commune is made up of several parishes, the King is to arrange as to the part which the ecclesiastical functionaries are to take in school affairs.

The affairs of rural districts which have no municipal council and which, as far as school affairs are concerned, are united to a parish or to a town, can be regulated by the minister of education until the King decides otherwise.

If any part of a commune, on account of some special conditions, the density of population, etc., may be considered a town, then if the communal administration demand it, the elementary schools may be organized wholly or in part according to the regulations for city schools.

Summarized, the new elementary school law includes two distinct laws, that for the country and that for the city. Twelve weeks a year is the duration for country schools, which is equal to the vacations in city schools, although these schools may be kept open fifteen weeks if the communal authorities so decide. The city schools have three divisions, the country schools two; so that the same teacher, who is

required by law to teach twenty-four weeks a year, may have charge of the two divisions. In the rural schools 36 hours weekly instruction is given in the highest, 30 hours in the lowest division. In cities the maximum for all divisions is 24 hours, but the municipal authorities can reduce this to 18 if they choose, so that every effort is made not to overwork the children. The legal maximum of children varies in different schools, but it averages 40 to 50 children in each division in cities, and 35 to 45 in country schools. The course of instruction is more extensive in city schools, and it may be observed that reading, being an acknowledged fundamental, is not included in the programme of studies; that the concentric method of developing the same study progressively in each course is not *de rigueur*, natural history, drawing, and geometry being found only in the second division, civic instruction in the third division, and physical sciences not at all. The programme for rural schools is less extensive, and seems to indicate that the children of rural districts are naturally less precocious, and slower in intellectual development than city children. History and geography are placed before the ten-year-old child; geometry does not appear; physical exercise, manual training, and drawing are optional only, so that there is a natural deference to the needs of agricultural districts. Continuation schools exist in the country, higher primaries in the cities. Instruction is free to all between 6 and 15 years of age in both city and rural schools. The school authorities comprise a school board and school council in each city and commune, in the cities composed (1) of at least one pastor and not more than three, designated by the bishop; (2) of a member of the municipal council, (3) and as many members as the municipal authorities decide. The council comprises all teachers of the elementary schools. In the rural districts a teacher, man or woman, appointed by his colleagues, holds place for two years in the council. The school board regulates the plan of study, time tables, etc., deferring all school affairs, however, to a higher council. The school board appoints the teachers, if approved by the higher council. The law does not state as to limit of salaries, but leaves that to the local authorities. This is found already to be a questionable method. But the law insists that each commune shall give at least to one teacher a complete position, that is, with lodgings for a family and land for two cows and a garden. The law is imperative as to religious instruction, inasmuch as it defines the school as a place where a Christian education must be given and that permanent place for teachers be given only to those who profess the Evangelical Lutheran faith.

STATISTICS.

The system of public and private schools has been clearly defined, but before proceeding to give figures it may be well to state that there are elementary, grammar (*Middleskole*), high schools, normal schools, Latin and Real-schools, the university, and special schools. Under the

higher grades come those which give a more extended education than the elementary grades, and which lead to the university or to practical life, most of them being boys' schools, although there are higher grades for both sexes and for girls alone. There are tuition fees required in secondary schools. The special schools are those which cover instruction in agriculture, nautical schools educating officers for the commercial marine, private maritime schools, military and naval colleges, and a school for civil engineers.

The total population for the year 1880 is stated to be 1,913,000. The children of school age at that date numbered 211,709, but an increase in that number is noted in 1888, the year under discussion in this presentation, when 222,317 pupils of school age were reported. The number of pupils enrolled in the stationary schools, *Faste-skoler*, was 205,825; in the ambulatory schools, *Omgang skoler*, the figures are not given.

The per cent of population in the stationary schools is about 10. Lack of figures forbids computation for all elementary schools, but the statement that there is no illiteracy in Norway seems not far from the truth.

Elementary pupils and teachers.—The number of school circles, *skolkredse*, each one of which is required by law to have an elementary school, was 6,282. The male teachers, *Laerere*, employed in this grade numbered 3,477; the women, *Laererinder*, 368.

In city schools 72,922 pupils (37,052 boys, 35,870 girls) were reported in 1888 in the ordinary grades of schools.

The number of communal schools for boys and girls was 74; pupils, 5,313. Of these schools 57 were of a private character, 24 of them being mixed schools, with 1,188 pupils.

Secondary schools, called *Offentlige høiere almueskoler, kommunale middelskoler og private høiere skoler*, include the Latin gymnasiet, Realgymnasiet, and Middelskoler. They number 63, with 10,484 students in 1887. These schools are again subdivided into 17 public, 36 communal, and 10 private schools; of these secondary grades 20 have a higher department containing a classical or mathematical line or both combined; 15 are public schools, 1 a communal school, and 4 private schools. Among the secondary schools are 17 mixed schools; there are also 28 secondary schools for girls only, 7 communal and 21 private.

A normal school is established in each one of the six dioceses into which the kingdom is divided. The number of pupils in these six schools preparing for teachers' positions in the year 1888-89 was 346—of these 316 from rural districts, 30 from cities. One hundred and sixty pupils had followed the course during two years, 17 during one year.

Higher education.—The university at Christiania reported 1,620 students in 1889. Statistics of special schools are not presented in the "Beretning om Skolevæsenets Tilstand for Aaret, 1888," from which these statistics are taken, but among them may be classed preparatory schools for industrial arts, which are of Danish origin and became a

fixture of the country in 1864. The state furnishes them an annual subsidy of \$17,688, which is reimbursed in part by the contributions in the different communities. It also gives an annual sum of \$7,524 for industrial schools and manual training. There are also technical evening schools at Drammen, Skien, Fredrikstad, Christiansand, Stavanger, and Trondjhem, which have an annual state subsidy of \$5,360. In the industrial region of the Fjord of Skien \$1,072 is accorded by the state to instruct mechanical workmen, and \$268 for teachers in technical schools, so that they may have the benefit of a trip for improvement in their specialty.

Length of school year.—By law twelve weeks annually in rural districts. There are schools, however, which have even a shorter term. In city schools a longer term is found. Each week has six days of school and each day six hours, except Saturday, when the school is closed the half day.

School age.—The school age, according to law, is from the seventh year in the towns, from the eighth in rural districts, to the date of confirmation, which is usually the fifteenth year.

FINANCE.

Income.—The income for schools is derived from governmental, county, municipal, and district funds. The school funds are made up from the interest of actual or eventual school funds, the public school funds voted by the Storting, voluntary gifts, fines, and amounts raised by the county and municipalities. Each county or *amt* (there are twenty such administrative districts) is allowed from the governmental funds double the sum raised by taxation in that subdivision of the kingdom. If a county assesses on its estates an average school tax of $1\frac{1}{2}$ skillings (about 1 cent) for each inhabitant of that section it is entitled to double that amount from the state. The greater part of the income for public schools is raised, however, by a tax levied in each district—each municipal district forming a school district with a school fund common to the circles or *kreds* into which the district is divided. Nearly every school district has from twelve to fourteen such circles, while all the school districts belonging to the same province form together a higher school district and have a common fund for the use of schools. The school taxes are assessed in proportion to the amounts owned by the taxpayers; no person is exempt from taxation, and in order to enforce regular attendance of pupils the parent or guardian, if no valid excuse for nonattendance of children is given, is fined by the school committee from 24 skillings to 5 specie dollars (about 22 cents to \$5.30). Such was the financial basis for carrying on the school system to date of June, 1889. The law passed on that day seems to leave financial matters somewhat *in statu quo*, but the principal features are noted here. They read as follows: Each county or *amt* of Norway ought to have a school budget supplied by funds voted from the county budget and by

a subsidy from the treasury on the following basis: If the general council votes for the school budget of the *amt* an amount equivalent to at least 8 öre ($1\frac{1}{3}$ cents) for each inhabitant of the rural districts, the school budget would be entitled to a sum from the state funds equal to a third of the amount voted, and a fourth from the Tromsøe and Finmark districts if the sum voted did not exceed 12 öre (about 3 cents) for each inhabitant. If, however, the county voted in excess of this amount the school budget would be increased double the amount from the state funds and treble in Tromsøe and Finmark, if the Storting voted the necessary funds.

From the school budget is to be paid, by the vote of the general council, (1) the pensions accruing to teachers after five or ten years' service, funds being furnished for said purpose by a tax which may reach 12 öre (3 cents) for each inhabitant; (2) the expenditures of administering the schools of the county, including the salary of a school inspector; (3) the subsidy for the building of schoolhouses with or without lodgings for the teacher, and a contribution for the purchase of land for the teacher, or the equivalent thereof; (4) the subsidy for school material; (5) subsidy for expenditures in communes when the means are lacking; (6) subsidy for sickness of substitute teachers; (7) subsidy for continuation schools, each commune having the right to reimburse itself for three-fourths of the expenses (school buildings and material not included) of one or more continuation schools carried on for two months; (8) subsidy for schools of manual training.

The state subsidies for teachers' salaries amount in each commune to a quarter of the salary paid (pension indemnity included); the commune to receive such subsidy at the close of each semester; this subsidy must not exceed 6 crowns (\$1.60) a week for each school of the second division, and 4 crowns (\$1.17) for the lower grade primaries. If, however, the Storting has voted the necessary funds, this state subsidy can be increased to one-third of the salary paid, if the higher council so recommend, in the communes which have extra expenses entailed upon them; the subsidy not to exceed 8 crowns (\$2.14) a week for the highest division and 6 crowns (\$1.60) for the lowest division. Pensions will be paid out of the communal funds, and the commune is required to pay all expenses of elementary and continuation schools of the commune in addition to this state subsidy. Expenditures for construction and repairs of school buildings, also for lighting, heating, moving of school material, janitor service, and teachers' traveling expenses for school purposes, if the school authorities so decide, may be chargeable as a whole or in part to the school district or circles of the commune. If the taxation is unequal in the districts the communal authorities ought to equalize it as much as possible, either by contributions or by funds granted by the commune. If the school is an ambulatory one those persons who have proper habitations for the holding of such school are required to keep it at least three weeks each year and at least one

week each time, the commune or administrative authorities to reimburse them for such usage. The refusal of such persons will cause the exaction of a fine of 8 crowns (\$2.14), and another place will be selected at once by the communal authorities.

If the communal administration so decides, the expenditures of elementary schools for children of the workmen may be paid, if they are willing to do so, by the proprietors of manufactories and industrial establishments which employ more than thirty or not less than twenty workmen. Other children may be admitted to these schools, but at the expense of the communal authorities, and if the schools have not been carried on for a year by the persons in charge of such industries, the communal authorities are required to see that schooling is furnished by the proper authorities.

If a school circle constitutes a separate district of the commune the expenditures ordinarily belonging to the commune will be charged to the circle and it, in its turn, will be exempted from the expenses ordinarily belonging to it.

Expenditure.—The amounts expended for school purposes by state and local authorities may be best understood by the following statistical presentation for the year 1888. It may be stated, however, that the amounts voted by the municipal authorities for the benefit of the county school fund are expended as follows: (1) Supplement to teachers' salaries; (2) contributions to secondary schools and to work schools; (3) for the construction of school buildings with or without lodging for the teachers and for ground allotted to teachers; (4) for the support of schools in four parishes; (5) supplementary fund to teachers for instructing pupil teachers. The state does not give financial aid to city schools, as they are, by law of July 12, 1848, in charge of the municipality.

Expenditures for 1888.

	Total.	State subsidies,
	Crowns.	Crowns.
I. Lower schools in rural districts:		
1. Rural communes, repairs and construction.....	2, 145, 195	14, 094
2. Expenditures by the circles in money.....	73, 286	.....
3. Expenditures by the circles for apparatus, school material, etc.....	62, 775	.....
4. Expenditures from the county school budget.....	502, 952	.....
With abatement on account of uncertain income in		
the smaller school budgets and comprised in their		
account.....	126, 270	.....
5. Lower grade schools in cities.....	376, 682	370, 260
6. Higher elementary schools in rural districts.....	1, 663, 704	16, 254
7. County and evening schools.....	23, 248	2, 016
8. Salaries of teachers in common schools.....	239, 245	161, 327
9. Aid from governmental funds to needy communes.....	606, 231	606, 231
II. Public secondary schools (Höiere almendannelse).....	31, 884	31, 884
III. Communal middle schools.....	785, 777	331, 813
IV. Seminaries (normal schools).....	602, 856	91, 460
V. Training of women teachers.....	102, 970	98, 706
VI. Gymnastics and military exercises.....	14, 308	14, 308
VII. Stipends for traveling and training courses for teachers.....	1, 874	1, 874
VIII. Provisions for the extension of Norwegian language among the Laps	16, 595	16, 595
and Finns.....	28, 000	28, 000
IX. Education of the defective classes.....	227, 931	227, 931
X. Pensions for teachers and their families.....	213, 739	213, 739
XI. For office of school directors.....	44, 410	44, 410

Expenditures for 1888—Continued.

	Total.	State subsidies.
XII. Art and manual training schools in Christiania <i>a</i>	53,057	23,535
XIII. Industrial schools for girls, work or apprenticeship schools for public service.....	37,596	37,596
XIV. Expenditures for examination for <i>examen artium</i> and maturity examinations in secondary schools.....	24,147	12,027
XV. The university.....	541,051	271,545
Total	7,913,991 \$2,121,949	2,620,395 6\$702,265

a During the school year 1890 the Government gave a subsidy of 14,000 crowns (\$3,752) to 178 schools for carrying on instruction in manual training.

b That is, of the whole amount expended for the schools in 1888, about one-third came from Government funds.

SUPERVISION AND ADMINISTRATION.

The administration of educational affairs in Norway is left, as far as the highest supervision is concerned, in about the position that it was before the promulgation of the new law. The immediate superintendence devolves now more upon local school boards than upon rectors, bishops, and other dignitaries. Prior to 1888, the date for which statistics are presented, supervision was as follows:

The highest school authority of the Kingdom was the Department of Ecclesiastical Affairs and Education, the reports of which are furnished to the King and legislative body, *i. e.*, the Storting, every third year. The chief officer of the educational division of the department has supervision of the university and of higher educational institutions, such as the classical and Real schools and the higher burgher schools. The normal schools are also under charge of this department and their teachers are appointed by the King. The department exercises general supervision over all schools of Norway, but with local officers in direct charge. The elementary schools come under the charge of the diocesan board in each of the six dioceses into which the kingdom is divided. Attached to this board, which is composed of the chief executive officer of the county and of the bishop of the diocese, is a school inspector, one for each diocese, whose duty it is to travel through the diocese and examine minutely into the condition of the common schools. These six ecclesiastical divisions were again subdivided into seventy-seven deaneries, the heads of which reported to the diocesan directors, and were invested with the higher inspection of schools and the control of school committees. The communal authorities have immediate charge of the schools of the commune and school district; but while the communal officers look after the externals the bishop and pastor, or clergyman, watch most carefully over the inner workings of the school. The ordinary school district has the same limits as the municipal district. The governing power consists of two coöperative boards, the school committee as the administrative board, the municipal council voting the necessary

funds. The school committee had for its members the pastor of the parish as chairman, one of the teachers of the district (elected by his colleagues), the chairman of the municipal council, and other members of the council, if it so decided. The duties of this committee were manifold. They inspected the schools, examined as to attendance, condition of buildings and furnishings, prepared the annual school budget to lay before the municipal council, and at the close of each year reported to the diocesan authorities as to the condition of schools in their respective districts. The city or town schools were and are under the immediate authority of the municipal council, and in the larger cities an inspector is installed.

The school committee may also appoint one or more of the residents of the district to look after the regular attendance of pupils, and the clerical member of the committee is expected to observe that order and diligence are maintained in the schools, and that a christian spirit is inculcated.

City schools.—According to the law of June 26, 1889, the following is the arrangement for the administration of city schools: Each town is required to have a school board which is composed (1) of one or more clergymen of the parish, the limit being three, the bishop of the diocese choosing those whom he wishes to have serve for a two years' period; (2) of a member of the municipal council chosen by the council at the commencement of each year; (3) of as many members, elected by the municipal administration, as it may consider advisable, these members being subject to the law of January, 1837, relative to municipal councils, as far as length of service and reappointment are concerned. The members of the school board choose from their own numbers a president and vice-president, who are to serve for a one year's period. A member of the magistracy and the presiding officer of the school council take part at the meetings of the school board as consulting members. The members of the school board who are not Protestants can not participate in the deliberations relative to religious instruction.

The duties of the school board¹ are to look out for the interests of the schools and for the children who are not in school. The school board holds meetings once a month and as much oftener as is necessary. It prepares the plan of studies and arranges the hours of work. It informs the magistracy, annually, of the funds required for the management of the schools. If the funds suffice, an inspector of elementary schools is to be appointed, and his duties are to be indicated by the board. The school board organizes a committee of inspection for each elementary school or for each group of schools in the same building. This committee is composed: (1) of a member chosen by the school board; (2) an ecclesiastic or clergyman appointed for a two year period by the bishop; (3) three members chosen by the parents of the children frequenting the school. One of the members acts as presiding officer of the committee. The committee is

¹It may be stated that four women have been elected members of the visitors board of the public schools at Christiansand.

required to keep constant watch over the school under its charge, and to give the school board any information desired. In addition the school committee may have a certain part in the distribution of the school funds, if the municipal authorities agree to it. The school board reports annually to the higher council in regard to the condition of schools, and every five years, oftener if the municipal authorities require it, a report on elementary schools must be published.

The elementary teachers, male and female, of the city or town form a school council, its object being to discuss the affairs of the schools in common. If there is a school inspector he takes part in the council and presides over it, if not, the school board signifies which member of the teaching force shall preside. If the teachers of the town number more than sixty, the school board decides whether it is advisable to have a school committee composed of others than the principals of the schools to join with the school council in the management of school affairs. The term of office of such members is two years, with change of half the number each year, the first time by ballot; a reelection is allowable, and acceptance is expected. The school board decides whether such a council is necessary, and whether an inspector or school director is to preside over the meetings. The members of the school council are to meet whenever the presiding officer requests, or oftener, if the members themselves decide that it is necessary for them to do so. No decision of the council is of value unless half of the members are present. If there is a division, the presiding officer's vote counts as two. The school council must consult with the school board in regard to the general organization of primary schools, the general regulations for order and discipline, text-books, and plan of studies.

The duties of the school superintendents are thus defined. The actual supervisor or superintendent of elementary schools ought, each in his district, to act as a higher inspector, to see that the school laws are carried out. The King decides, with the approbation of the Storting, how these officials of higher inspection are to be chosen. The bishop and the dean of the clergymen watch over the inspection of religious instruction. These superintendents of elementary instruction are supposed to travel about and reside in the different towns of the district, so as to keep familiar with methods employed and take part in the school councils, while in regard to religious matters they are to consult the bishop. The bishop and supervisors are authorized to participate in discussions of the school board and the municipal council in regard to school affairs, but their vote is not counted. This board of inspection is required to furnish an annual report each year to the minister of education.

Rural schools.—For the administering of school affairs in rural districts the arrangement differs from that of city schools, as will be seen.

Each commune must have a school board, which is to be composed of: (1) a clergyman or curate chosen by the bishop; (2) the president of the municipal council; (3) a regular teacher elected for two years by the teachers, both male and female, at a meeting presided over by the president of the school board; (4) as many members elected by the communal administrative officers as they desire, term of service of officers, reëlection, etc., being decreed by law of January 14, 1837; (5) the proprietor of a manufactory or other industry who pays for a school for the children of his workmen. The members of the school board who are not professing Christians will not be allowed to participate in the discussions appertaining to religious instruction. The clergymen of the parish are authorized to take charge of the religious instruction in the elementary grades.

The duties of the school board are to watch over all the interests of the elementary and continuation schools; to see that children who do not attend school receive elementary instruction; to prepare the school regulations and plan of studies and to arrange the hours of recitations; to present an estimate of the school funds necessary; to organize for each school circle or district a committee of inspection, which shall be composed of one member elected by the school board and of three members chosen in a meeting of district personages. This committee is to keep constant watch over the schools, and to keep the school board informed as to the attendance, absenteeism, discipline, whereabouts of ambulatory schools, etc. The committee may also suggest as to school funds, etc.

The meeting which elects the school committee is to be composed of all taxpayers who are at least 25 years of age, the parents of school children, etc. When voting for school expenses only those who pay are allowed to vote. The meetings may be called when the school board desires or when at least five heads of families request it.

The school board must report in regard to the schools annually to the higher council of inspection, and must publish a report every five years if the communal authorities so require.

The school board is to obtain information in regard to the instruction given children who do not attend the public schools, and, if such instruction is not what it should be, the children can be required to pass an examination before the teachers of the elementary schools, if the parents desire it. Singing, drawing, gymnastics and manual training are not included in such examinations, however. The school board is to see that backward children have suitable instruction in special schools arranged for that purpose, and that children of indigent parents receive whatever material aid is required so that they may attend school. The school fund not being sufficient for such purpose, the public charitable organizations may be called upon, as also in case children are incorrigible, so that they, too, may receive school privileges where they will not demoralize the better class of children.

The superintendent or supervisor of elementary instruction ought, each in his district, to see that the laws are carried out; in case of his demise or withdrawal from office the King will decide, with the consent of the Storting, how such higher inspection is to be carried out. The bishop and dean of the clergymen have religious instruction in charge. The superintendents are expected to visit the schools of other localities and observe how they are carried on and to assist the school board and teachers by suggestions, counsel, etc. Before deciding any matter appertaining to religious instruction the bishop's advice should be taken. The superintendent and bishop are authorized to participate in the meetings of the school boards, and in the discussions of school affairs by the communal authorities. The superintendent also assists at the deliberations of the general council and of the departmental school administration.

Each county is to have a county school board composed of three members chosen by the general council. They are chosen for four years with alternate change of two, and then one member every two years. There are also two substitutes chosen each time. The school administration of the department chooses its own president and vice-president annually. It has charge of all school affairs which are common to the county; is supposed to have a thorough knowledge of all school affairs, and each year suggests as to the school budget, each commune being supposed to notify the higher inspection or supervisor when a meeting will be held to discuss school affairs.

TRAINING OF TEACHERS.¹

In Norway the teachers' calling is considered a high one and the teachers are generally esteemed. To thoroughly educate them for such a profession the Norwegian Government has arranged for the training of teachers for elementary schools in the six normal schools, one for each diocese of the kingdom. These schools, situated at Asker, Hamar, Kristiansand, Stordöen, Klaebu, and Tromsøe, are under governmental supervision, and each normal has a practice school attached to it, where the pupils can put the theoretical part of their education into practice. There is also a class of minor training schools for teachers with studies similar to the higher elementary schools; these are under the supervision of the board of the diocese and are under inspection of the dean and pastor of the parish, while the state normals come under the head of seminaries; these latter institutions are the so-called *Lærerskoler*, which are either attached to the higher elementary grades or become the upper class of the general elementary school. There are comparatively few state normal schools for women, as female teachers are not yet generally employed in the schools, but there have been for several years private normals for the prepara-

¹ The status of and general regulations appertaining to teachers prior to 1880 are here presented. The new law of 1889, as it applies to teachers in city and rural schools, differs in many particulars. Such changes are noted a few lines below.

tion of women for the teaching force, and a normal under Government auspices was established for this sex in 1890, as the Norwegians realize the progressive movements of the times and have had under discussion for some time the need of such normals for women.

The normals proper received 102,970 crowns (\$27,661) in 1888; of this amount the state gave 98,706 crowns (\$25,453). The amount expended for the instruction of teachers in the other schools was 14,308 crowns (\$3,840). The number of students in the six normal schools mentioned above was 346; of these 316 were from the rural districts, 30 from the cities, and 99 from other dioceses; 132 had free instruction and 59 had scholarships. The teachers were reported as 15 with academic instruction and 12 with normal training. The directors and teachers of these normals are appointed by the King, while the teachers of the minor normals are appointed by the diocesan board.

Teachers in the public schools are presumed to have passed an examination either in the normal schools or the equivalent of the same elsewhere.

The course in the normals comprises religion, a thorough knowledge of the native tongue, arithmetic, music, geography, history, natural sciences, penmanship, drawing, and gymnastics; there is a model school in connection with each.

As a general rule, only those teachers who have passed an examination at these higher seminaries or normal schools receive positions in the common public schools.

If among the candidates who are appointed by the diocesan authorities, on recommendation of the local school board, there are no persons who have submitted to such examination, then the effort is made to obtain as teacher one who has followed the lower course in a secondary school and had a year's practice as pupil teacher. Assistant teachers and teachers of infant schools receive their appointment directly from the local school board. Women teachers are usually placed in charge of the lower grades in elementary schools or in charge of the girls' classes in mixed schools, and under the new law female teachers may be appointed as head mistresses in the public schools, although the salaries may vary from those of male teachers in like position.

The date of the examination of women teachers for rural schools is usually arranged by the King, as is also the salary allotted to them.

The salaries of teachers depend upon the district authorities, but it is really the provincial council or county board which fixes the minimum according to the number of weeks which school is kept open. The instructors in rural districts also receive a state subsidy which was definitely fixed in 1879 at about 2 crowns (53.6 cents) for each week of instruction given, the amount to go to such teachers as receive more than 8 crowns (\$2.14) a week from the communal authorities.

Both in city and rural districts a pension is accorded to teachers after certain length of service. In 1880 it was stated that more than two-

thirds of the rural school teachers received annuities for either five or ten years' service, while many teachers had both lodging and ground placed at their disposal by the authorities.

The law of 1889 deals with this division of the subject and places the teachers' status much more clearly before the reader, but it places the appointment of teachers in the power of local boards, and this has already caused much adverse comment. The training, examination, salary, and pensioning of instructors in city schools are given as follows:

City schools.—Teachers can only be employed in elementary grades of city or town schools if they speak the language of the country and are members of the established church of Norway. In order to obtain a permanent place they must be at least 20 years of age, must have passed the graduating examination from a normal school or one corresponding to the examination required for entrance into the university. In addition there are certain requisites defined by the constitution. Exceptions to such preparation of teachers are made if the candidate for a teacher's position can certify that he has been connected with either a public or private school as teacher.

Teachers are appointed by the school board, subject to the decision of the higher council. If the candidate is not satisfactory to the higher council the matter may be referred to the municipal authorities, who, siding with the higher council, must notify the school board to appoint the candidate preferred by that council. The teachers may be employed provisionally at first, the time not to extend over a year; if the teacher fulfills all conditions he may receive a permanent appointment; if not, the appointment may be revoked after three months' notice and another candidate may be employed. In case of grave complications the teacher may be suspended from his functions, but the pay will go on until the investigation of the affair by the school authorities.

The teachers themselves form a school council, with the object of discussing school affairs; the school inspector presides, or, if not, the school board appoints a presiding officer from among the teachers.

The teacher who is charged with the duties of inspector may request to be relieved of a certain number of hours of instruction. Auxiliary teachers may be employed for singing, manual training, drawing, and arrangements may be made to give instruction by the hour if there does not seem to be a necessity for a person to fill a permanent position.

The teacher's salary is arranged according to fixed rules elaborated by the school board and submitted to the municipal authorities by the advice of the higher council of inspection. The decision of the municipal authorities will be forwarded to the higher council, thence to the school board, and for final action to the municipal authorities again. The salaries are arranged in two groups, the minimum of the higher group to be equal to the maximum of the lower group. Two-thirds of those in permanent employ belong to the lower group. In proportion

to the total number, the number of female teachers employed should not be larger than that of the males in the higher group. The regulations fix the number of hours each week expected of a regular teacher, the minimum salary of each group, the time of payment, the years of service, etc. As to the matter of pay of auxiliary teachers and substitutes it is to be decided by the municipal authorities. Each regular teacher of the lower group is entitled to increase of pay after serving the number of years required by law. In case of illness certain pay will be allowed.

Rural schools.—As in the city schools, candidates for teachers' positions are required to be familiar with the language of the country, to be Protestants, to be 20 years of age, and to have a certificate showing that they have passed the examination required by law. Such certificate entitles them to a permanent place as teacher in a lower division, or to teach special branches in the second division of the elementary grades, for not more than 12 weeks, however. The prerequisites for a teacher's position in the second or higher division are a normal-school diploma or proof of passing the examination required for the entrance to the university, and a few other proofs designated by law. The possession of such proof accredits the teacher with a permanent place in any division of the elementary grades. When a vacancy occurs the public is informed by the school board, and it is indicated whether a man or woman teacher is desired for such a position. The delays attendant upon the appointment are also placed before the public. The school board makes the appointment, but takes the advice of the committee of inspection of the district in regard to the candidate, and before making a final decision the higher council of inspection is to be consulted. If the board and council do not agree as to the candidate the communal administration is referred to, and if the administration and the higher council agree their candidate must be selected. A similar rule applies to the choice of the auxiliary teachers for special branches, and substitutes. Any persons occupying such positions may be tried for a while in the positions leading to permanent appointments. If the teacher is to be expected to fill the functions of chorister the bishop selects the teacher for that position.

Teachers of either sex who are not engaged permanently may have their services dispensed with after three months' notice. If those holding permanent appointments have failed in their duties or there is complaint in regard to professional or private conduct the appointment may be revoked by the school board in accord with the committee of inspection, and if the case is especially aggravated the teachers can be relieved at once of their duties pending official action; but the salary is to continue until the matter has been thoroughly canvassed. The school board can request all teachers of the commune to unite with it twice a year to discuss questions which may be of benefit to the schools. The higher council of inspection is to be notified in due season of these reunions.

The duty of the teachers is, not only by their method of instruction, but in every way, to conform to the designated plan of studies, to keep up school discipline, to give the pupils under their charge a Christian education, and to watch over the children both in and out of school.

The regular teachers holding permanent positions are expected to teach 24 weeks each year in one or both divisions. Auxiliary teachers have charge of extra branches which cannot be undertaken by the teacher proper. Singing, gymnastics, drawing, and manual training may be taught by the hour.

The general council of each county determines the minimum salary for permanent teachers. This minimum for the second division of the elementary grades is not to be less than 12 crowns (\$3.21) each week, and for the lower division (for little folks) not less than 8 crowns (\$2.14) for 36 hours of teaching in the upper division, and 30 hours in the lower division. After five or ten years' service in rural districts, or in the city, teachers are allowed certain additional emoluments, the amount being fixed by the school and municipal authorities. Each commune is to furnish at least one teacher with lodging suited to a family, and ground accompanying it, and this may be conceded to more than one teacher, or, if land is not to be procured, certain State or communal funds may be allowed him.

According to the earlier laws, teachers who had attained the age of 60 and served 30 years, also such as were incurably sick, were to receive a pension equal to 75 per cent of their salary. If at the age of 55 they had served 25 years, they would also receive a pension, but of less amount. The Government and the parishes contribute to the pension fund. In 1891, among other educational movements, a bill which dealt with the subject of elementary teachers was laid before the Storting. Its provisions were that every teacher who had reached his sixtieth year, and had at least twenty-five years of service after his twenty-fifth year, should be entitled to a pension of 50 per cent of his salary.

Teachers who have not less than 10 years of service will be granted retiring pensions, if recommended by their superior officers, and if their financial condition makes it needful. These pensions are to be voted as follows: 30 per cent of salary for 10 years' service; 40 per cent for 20 years' service; 50 per cent for 25 years; 60 per cent for 30 years and upwards. This is to be the maximum.

The teachers are required to secure annuities of 10 per cent to their widows, and 20 per cent in case of an increase of 50 per cent of the teacher's salary before his forty-fifth year. The power of settling a teacher's pension, as well as the payment of it, is vested by the new bill in the local authorities. This special proviso seems to meet with general approval, as those authorities know much better than the Government or the Storting what is most needed. The system of annuities is well adapted for lower grade public officials. The officials who pay for

their own pension must necessarily have higher fixed salaries, if their profession is not to suffer. If the system of self-pensioning is carried out, then all expenses of administration must be added, and the consequence is that this plan remains the dearer of the two methods.

COURSES OF STUDY.

Elementary schools.—The law of May 16, 1860, states that the object of the common schools is to second the education of the family by instructing children in the principles of Christian religion, and, by giving them such knowledge as each member of society should possess, cause them to advance in general knowledge as far as compatible with circumstances. The beginnings of such education covered the three R's and selections from a reading book published by the Government, which selections related to history, geography, and a knowledge of nature and the Christian religion according to the tenets of the established Lutheran Church. In the more advanced classes, for pupils about 12 years of age, more complete instruction in these branches was given, with the addition of geography, history, natural history, drawing and geometry, mathematics, political economy, and one foreign language. Whenever the school committee allowed it, gymnastic and military exercises were taught to the boys, and annually there was a military parade.

According to the new law the Christian character of the school is preserved, the children of Dissenters only being exempted from enforced religious instruction, more stress is laid upon secular subjects; manual training, gymnastics, and military exercises appear more prominently in the course.

City schools.—The course of study in elementary divisions, according to law of June 26, 1889, is as follows: Lowest division, religious instruction, Norwegian language, history, geography, arithmetic, writing, singing, gymnastic exercises, manual training for girls, and, if so ordered by the municipal authorities, also for boys. In the second division, same studies as above, manual training for both boys and girls, natural history, geometry, and drawing. In the third or highest division, religious instruction, Norwegian language and history (including elementary studies in regard to national institutions), natural history (including elements of hygiene), arithmetic, and gymnastic exercises, with target practice. The school board, if requested by the parents, is at liberty to excuse pupils who are backward, or physically disabled, from certain studies, or from full hours of recitation, which hours are not to exceed 24 each week, unless there are special studies, such as foreign languages, and then not to exceed 30 hours. Pupils who are Dissenters may also be excused from the religious exercises.

A clergyman of the city is authorized to take charge of the religious instruction in elementary schools. The books to be used in religious exercises must be authorized by the King. The choice of text-books

for other studies must be limited to those which have nothing against the established religion or contrary to the laws of the State. The decision of the school board in regard to books is to be approved by the higher council. If the higher council finds it necessary to appeal to the tribunals concerning the suppression of any books, it has the authority to interdict the use of the books until the matter is decided. The school law makes manual training obligatory in the second class in boys' schools, age 11 to 12 years. For older boys the authorities may decide whether it is requisite. In the rural schools it is taught whenever advisable.

Rural schools.—The course of study in the lower division comprises religious instruction, Norwegian language, arithmetic, writing and singing, with oral instruction preparatory to entering the higher divisions. In the higher division the same studies, with the addition of geography, history, elements of instruction regarding national institutions, natural history and the elements of hygiene, manual training, physical exercises, including target practice. As in the city schools, backward children and those of feeble health may be exempted from following the full course, if the parents request it, and children of Dissenters may omit the religious exercises. Special courses may be arranged, if the communal authorities see fit, for children who are not able to take the full course, the expense of such courses to be defrayed by the parents or guardians. Optional courses may be attached to the higher division, but additional hours will be required for such instruction, and no class must have more than 6 additional weeks a year for such purpose. The studies to be pursued are to be those of the elementary grades or similar ones. The duration of the continuation schools may be from one to six months.

In one of the city schools of Christiania, which had both free and pay pupils, a visitor¹ to the school observed that the religious exercises included the Old and New Testaments, Book of Psalms, Luther's Catechism, and the History of the Reformation. In the Norwegian language the exercises served to develop thought and language. They included reading by the reading-writing method, composition, poetry, exercises in orthography and in caligraphy. In arithmetic the instruction consisted of object lessons, counting desks and chairs, teaching rules of ten up to one hundred, division by tens, rule of five, mental calculation, moneys, weights and measures. The exercises in geography for the second and third classes consisted of general instruction, with study of maps of Christiania, Norway, and Europe. National history was introduced in the third class; then there were gymnastic exercises and singing. Manual training was not obligatory for boys, but instruction was given in knitting, sewing, and in cutting paper according to dimensions specified. In the fourth class the pay pupils had drawing and gymnastics. In the fifth, sixth, and seventh classes natural history and geometry

¹ Rapport au ministre de l'instruction publique [France], par Mlle. Matrat.

were added to the other studies, and the paying pupils had physics taught them.

At one of the largest private schools in Christiania a course of instruction in manual training for girls was given; this included carpentry, turning, and wood carving.

A correspondent of the London Journal of Education in 1890, in referring to the studies pursued, or to be pursued, in elementary schools of Norway, says:

Sloyd instruction is still making progress in all our schools. In some intermediate schools the maximum marks given for this subject at the summer examinations are the same as those in the other subjects, but our capital (Christiania) takes here, as in most reforms, the lead. Its local board has just appointed a Sloyd inspector to have the supreme care of the Sloyd instruction in all the primary schools of the city. This official has a very good salary. It is to be hoped that the efforts of the Sloyd inspector will give manual training additional importance in our schools. The municipal council of Christiania has also formed a training school for educating Sloyd teachers. This school begins its courses with 24 pupils. In the primary schools of Christiania there are at present 16,294 children in 459 classes. In each class there are, accordingly, 35½ pupils on an average. This number is considerably higher than what we think advisable, as 30 pupils in one class are esteemed to be the desirable maximum. English is the foreign language mostly spoken in Norway. It is also taught in all intermediate schools, and read by the majority of pupils in secondary schools and in many places in the primary continuation schools. Certain politicians and pedagogues recommend the making it a compulsory subject in the higher classes of the primary schools. One of the influential dailies (Verdens Ganz) writes as follows on this subject: "English is already spoken by nearly one-third of the population of the earth. If you wish to learn any foreign language there is no doubt it should be English. To master such a universal language is far better than a great deal of what school children torment themselves to learn, only to forget it later on. Instruction in English would be of far greater importance than courses for learning the Norwegian dialect, and the like stuff, and it is of greater value than Old Norse and all the dead classical languages put together. English gives you entrance into a rich culture; it is of practical value in numberless circumstances, and is a mighty weapon in the struggle for life to every young man who has wholly mastered it."

This statement is given in full, as it shows that in the matter of elementary education, as well as that of secondary education, the general trend of educational movements in Norway is toward those branches which would naturally become a greater power in following any special pursuit in practical life.

Intermediate and secondary grades.—In Norway there is between the people's schools and gymnasia an intermediate grade of school, the six-class middle school, based on the law of June 1869, which has the aim of preparing for the Gymnasia and also giving a general education to those who are fitting for practical life. For entrance there is an examination, which is only permissible to children who are fully nine years of age. The course of instruction covers religion, mother tongue, history, geography, arithmetic, and writing; the second half year German, one term later natural sciences and drawing, a year later geometry. With the fourth year the pupil chooses whether he will follow the Latin or English course, the former leading to the Gymnasia, the latter being equivalent in part to the courses which lead to Real-schools, Real-gymnasias, etc. French begins with the fifth year, but it is an optional

branch. The pupil who passes the graduation examination can enter the real classes or the Gymnasia. The first have a two-year course, which covers such branches as are suited for practical life, such as bookkeeping and national economy. The studies are arranged in two groups, with or without modern languages. The pupil makes his choice of one of the two. The Gymnasia have two divisions, the Latin and Realgymnasia, the studies naturally leading from either one or the other of the divisions in the intermediate grades. The Realgymnasia have no Latin; the Latin gymnasia have English from the second year on, and then only as an optional study. The course of study is similar to that of the German gymnasia. In examinations Greek and mathematics rank with the German gymnasia, while Latin is not carried on to such a high degree. German is not found in the Latin gymnasia, but is carried on for two years in the Realgymnasia, so that the pupils have seven and one-half years' study of that language. The amount of mathematics in the Realgymnasia is similar to that of German gymnasia; natural sciences are carried to a more advanced point; the modern languages are not studied to such an extent. The course in both Latin and Realgymnasia is of three years, the *examen artium* taking place at the end of that time. Those who pass are called, according to their studies, either Real or Latin students. The passing of this examination admits to the university studies or to technical institutes; still if the Latin student wants to enter the military school he has to pass a practical examination, which is not severe.

If the Realgymnasist aims to study medicine, he has to pass an examination in Latin with similar requirements to those expected of middle-school pupils, and not the Latin gymnasia graduation requirements. If he aims to study philology and theology, he must pass a verbal examination in Latin and Greek, with similar requirements to the graduation examination of Latin gymnasia.

The secondary schools of Norway are organized so as to be free from any one sidedness, fitting as they do for either practical or professional life. The course of study employed in these schools has existed for twenty years in Norway, and it has been clearly demonstrated that two-thirds of the students from the middle schools pass through the Latin gymnasia and one-third through the Realgymnasia. This may be explained in part by the fact that the earlier Latin schools were changed into Latin gymnasia, without great cost. When the circumstances were such that only one high-school course could be pursued, it was usually the Latin gymnasia which attracted the most pupils. The time tables for the Realgymnasia show the number of hours devoted to different branches, viz:

Class	I.	II.	III.
Age	15	16	17
Religion	1	1	2
Norwegian and old Norse	3	4	4
English	4	5	5
French	4	2	2
German	1	1	1
History	3	3	3
Geography	1	1	2
Natural science	6	5	4
Mathematics	5	6	6
Drawing	2	2	2
Total	50	50	50

This was the course of study for many years in Norway, but in the matter of secondary schools, as well as of the more elementary grades, endeavors were made to improve upon the former courses and plans. By a decree of March 1, 1885, the law of 1869 was to be modified to this extent in the middle or intermediate grades and the Latin gymnasia.

The course of study in middle schools, by decree of March, 1885, is as follows:

Class	I.	II.]	III.	IV.	V.	VI.
Age	9	10	11	12	13	14
Religion	3	3	3	2	2	2
Norwegian	8	5	5	4	3	3
German		6	5	4		
English						
Latin						
History	3	3	4	3	3	3
Geography	4	2	2	2	2	2
Natural sciences		2	2	2	3	2
Mathematics	4	4	5	6	5	6
Drawing		2	2			
Writing	4	3	2			
Total	26	30	30	30	30	30

With class IV comes a subdivision into English (or Real) course and Latin course. In classes V and VI German is studied for four hours in the Real and three in the Latin division; in classes IV, V, and VI English is studied for five hours in the Real course, and Latin for seven hours in the Latin subdivision; in class IV of the Real course drawing is found for two hours, and in classes V and VI of the Latin course for one hour each.

In classes V and VI, French is optional for two hours, while for some years natural sciences ranked as one hour study only in the fifth and sixth classes of Real divisions and was left blank in the Latin division.

The hours of study in the Latin gymnasium by decree of March, 1885, were as follows:

Class	I.	II.	III.
Age	15	16	17
Religion	1	1	2
Norwegian and Old Norse	3	4	4
Latin	9	10	9
Greek	7	7	7
French	4	2	2
German	1	.....	.....
History and geography	3	3	3
Mathematics	2	3	3
Total	30	30	30

But the time-table and studies adopted at that date do not seem to have entirely satisfied the educators of Norway; for, from time to time, the press of the country has chronicled discussions of the subject, and some of the most earnest debates in the Storthing have been in regard to secondary education, with especial discussions of the position of the classics in high schools. A digest of the discussions is here given, as it shows the tendency of thought in Norway at the present day. Many of the speakers advised radical changes in the course of study of secondary schools. The late minister of education, Sverdrup, advocated the theory that there is too much Latin and Greek taught, and that the path to higher educational attainment is by the pursuit of more modern studies; while a former colleague of his, Hertzberg, of Christiania, took the opposite side in the discussion, by earnestly advocating the retention of these branches because they have such firm root in general European culture since time immemorial. Prof. Horst, of Tromsøe, advocated the suppression of Greek as the first step in reform, and he stated that the younger philologists agree that, unless a man is to follow a profession in which Latin and Greek are requisites, the better course of study is one which tends to more general culture. Others who have been teachers for many years took earnest part in the discussion and stated that they had reached similar conclusions, *i. e.*, that knowledge of the classics is not of much service in after life, but that a thorough knowledge of some more practical branches is requisite. Several of the members of the Storthing deprecated too rapid changes, as liable to be classed as revolutionary movements, but they suggested the suppression of Greek and the leaving Latin as an optional study and the adopting of new regulations based upon Latin as an optional study only.

The outcome of the discussions going on from time to time is that a royal commission for the reform of secondary schools was appointed in 1890, which consisted of seven members, one of whom is a professor of theology at the University of Christiania and the rest practical schoolmen. Both the conservative and progressive elements were represented, and it is conceded that the result of their deliberations will be excellent. According to the decision of the commission the common school is to be a refining influence upon the masses, and in order that satisfaction be given it must in a measure define its own

limits. The best preparation for the higher schools is a well-grounded elementary education, instruction as far as possible to aid the individual pupil to follow his special bent. Suggestions were made in the bill, which received Royal approval on September 3, 1890, which would make the present third class of the intermediate grade the first class of the new middle school, and the first five years of the common schools would become the first and second division of preparatory grades for the higher schools. One of the commission intimated that at present the two lowest complete divisions of city schools are adapted to the reform movements in progress and that they ought already to be preparatory divisions for the higher grades. The commission was unanimous in stating that the middle schools have too many subjects of study and that there must be a greater concentration of instruction. Certain members proposed that the central point of study for the gymnasias should be religion, the mother tongue, and history. In these grades there should be certain restrictions; physics should be taught with respect to its importance for practical life, physiology taught in a manner to bring out the most important rules for health and hygiene. Others proposed mathematics as a basis for practical instruction; German to be considered the most important language next to the mother tongue; the time for the study of the last mentioned to be increased. French might be omitted, but English or Latin must be kept in the course. According to a proposition made, the middle schools, from the third class on, should be separated into the Latin and English divisions, and the most desirable combination suggested was to have three years in Latin—*i. e.*, two in the middle schools and one in the gymnasias—the special branches chosen in the middle schools to lead either to the commercial, technical, military, or naval schools. Discussions as to the study of Greek and Latin are noted above, the members differing as to the amount of ancient languages and as to their proper place in the school programme.

There seemed, however, to be unanimity as to the time of instruction, which should not exceed 6 hours daily, from 8½ or 9 o'clock till 2 o'clock, and that recitations should not be longer than 45 minutes, although the first recitation might be 50 minutes. There should also be recesses of five, ten, or twenty minutes, and gymnastic movements and going into the fresh air were considered needful, so as to keep the children in a proper state of health. Coeducation was discussed, and it was considered that this uniting of boys and girls together in the same school is a pedagogical problem worthy of study, but that the advance movements in this respect must be made by degrees, some of the members seeming to consider that five hours of study a day were all that the health of the girls would admit, while the boys should have six hours. But this statement seems to have been controverted by the statement made by two lady superintendents, who clearly intimate that there are some boys as well as girls who are physically weak, and that where the normal condition of health is found both sexes have equal

mental development, and should, therefore, be treated alike in the matter and length of study. Reference was made in the discussion to the comparatively unlimited freedom as regards the educational system, in even the smallest communities of the different States in North America, to coeducation as practiced there, and to its gaining ground in the public schools, and to the advisability of its establishment in Norway. Reference was made to the earlier periods when the greatest academies of learning had possibly more independence and intellectuality than at present. The members intimated that the city schools are in general a result of the pedagogical wisdom of the times, and are usually in good condition, as they receive the greater part of the money allotted by the State; consequently they can be made to progress in the right direction, and the efforts for rural schools will come more gradually.

The suggestions made by the commission give, as it were, the essence of the practical pedagogical progressive spirit, as shown in other countries, and endeavors will be made in the future, as an outcome of the work of this commission, to bring about the most secure and the newest school reforms, the basis being that of practical experience in Norway and elsewhere, the result a firm and natural development in the domain of education.

The time-tables presented as appendices to the above bill are as follows:

Time-table for a fourth-class middle school, with gymnasia, to be a continuation of the common schools, first and second divisions.

[Classes I-IV of the new middle school are to rank similarly to the present classes III-VI.]

Classes <i>e</i>	Middle school. <i>a</i> English course; <i>b</i> Latin course.				<i>c</i> Realgymnasia; <i>d</i> Latin gymnasia.			Latin-Greek gymnasia.		
	I.	II.	III.	IV.	I.	II.	III.	I.	II.	III.
Religion.....	2	2	2	<i>f</i> 1	1	2	1	1	2	4
Mother tongue.....	5	5	4	4	3	5	<i>g</i> 4-5	3	5	1
German.....	5	6	5	5	3	2	3	3	2	3
English.....			<i>a</i> 6	<i>a</i> 6	<i>c</i> 4	3-2	3-2		<i>h</i> 2	2
Latin.....			<i>b</i> 6	<i>b</i> 6	<i>d, i</i> 6	<i>d</i> 8	<i>d</i> 8	6	8	8
French.....					6	3	3			
Greek.....								6	6	7
History.....	3	3	2	2	3	3	3	3	3	3
Geography.....	2	2	2	2	1	1	1	1		
Natural science.....	2	2	2	3	3	2-2	2-2	3	<i>h</i> 2	2
Mathematics.....	4	6	5	5	4	3-2	3-2	4	2	2
Drawing.....	2	2	2	2	<i>c</i> 2	<i>c</i> 2	<i>c</i> 2			
Writing.....	2	1								
Total.....	27	29	30	30	30	30	30	30	30	30
Singing.....	1	1								
Gymnastic sløj.d. or singing..	6	6	6	6	6	6	6	6	6	6
Grand total.....	34	36	36	36	36	36	36	36	36	36

a English course.

b Latin course.

c Realgymnasia.

d Latin gymnasia.

e In this table the hours of recitation are the same in courses *a* and *b* unless otherwise indicated.

g Figures 4-5 and 3-2 indicate 4 hours in *c* course and 5 hours in *d* course, etc.

h English and natural sciences as alternative courses.

i Pupils who have followed the Latin course till this class may then go over to the Real division and take either English or drawing.

Time-table for fifth-class school for girls (with fifth-class preparatory school; the first and second divisions of common school).

Classes	I.	II.	III.	IV.	V.	Remarks.
Religion	2	2	2	1	1	Those preparing for confirmation do not follow this daily course.
Mother tongue	4	4	3	3	4	
German	5	5	3	3	4	Optional.
English			4	4	4	
French					5	Optional.
History	3	3	2	2	2	
Geography	2	2	2	2		Physics obligatory; chemistry optional.
Natural sciences	2	2	2	2	1-2	
Ciphering	3	2	2	2	2	Optional.
Mathematics			2	4	4	
Drawing	1	2	2	2	2	Obligatory to class III, then optional.
Writing	1	1	1	1	1	
Handiwork	2	2	2	3	3	Obligatory in 2 classes, then optional.
Total	25	25	25	25	25	
Gymnastics, domestic economy, etc	5	5	5	5	5	
Grand total	30	30	30	30	30	

Time-table for a school where coeducation is employed.

Classes	I.		II.		III.		IV.		V.	Remarks.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Girls.	
Religion	2	2	2	2	2	2	1	1	1	
Mother tongue	5	4	5	3	4	3	4	3	4	
German	5	5	6	5	5	3	4	3	4	
English, Latin					6	5	6	3	4	
History	2	2	3	3	2	2	2	2	2	
Geography	2	2	2	2	2	2	2	2	2	
Natural sciences	2	2	2	2	2	2	3	3	(2)	(2) Chemistry optional.
Ciphering	4	3	2	2	2	2	2	2	2	
Mathematics			4		3	(2)	3	(3)	(5)	
Drawing	2	1	2	2	2	1	2	2	2	
Writing	2	1	1	1					(1)	
French									(5)	(1) Optional.
Domestic economy		2		2		(2)		(3)	(3)	(5) Optional.
										As in fifth class girls' school.
Total	26	24	29	24	30	24	30	24	22	
Gymnastics and singing	6	6	6	6	6	6	6	6	6	
Grand total	32	30	35	30	36	30	36	30	28	

Normal and university courses.—An epitome of the course of study in normal schools was presented under the heading "Teachers." It may be noted here, however, that a plan of reform, suggested in 1884, was to modify what was at that time called an unsatisfactory course for the normals. More space was to be given to the study of the mother tongue; the patois of the peasant, *Landsmaal*, was to be placed upon an equal footing with the Danish-Norwegian tongue; Old Norse was to be taught in order to make the study of the language of the present easier; English or German was to be added as an optional study; special importance was to be given to gymnastic and military exercises and manual training. To what degree the general progressive movements have touched these schools for the training of teachers is not known.

The organization of the university corresponds to the liberal ideas of

the Norwegians. It has neither chancellor, vice-chancellor nor rector, and it is not necessary to have the doctor's degree to obtain high position in the university. Its different faculties—viz, theology, law, medicine, philosophy, and the sciences—have each a dean in charge. In order to be admitted as a student it is necessary to have passed the *examen artium*. Most of the candidates for admission are from the gymnasia and realschools, and are supposed to have a certificate from the *Middelskoler*. The examining board, which consists of university professors, distinguishes between the *Classiske examen artium* and the *Real artium*, the latter being sufficient for those who wish to follow a course in mathematical, physical and natural sciences, while the former is required of those who wish to enter the other faculties. There are really five faculties, as the faculty of philosophy has two divisions—that of historical and philosophical sciences, and that of mathematical and natural sciences. The examination for entrance takes place in the latter part of July and first of August. The first semester is from the middle of January to the first half of May, the second semester from August 1 to end of November. Women are admitted to the university, and by law of June 14, 1884, they are accorded the same rights as men students as far as the examinations are concerned; but in order to prepare for the examinations they are obliged to have private instruction, as the schools for girls are not of sufficiently high grade to prepare for the university studies. They are also allowed to take the academic degrees and are permitted to obtain scholarships and legacies which accrue to the university. The academic board gives stipendia to those professors who desire to travel or pursue a course of study elsewhere. The younger professors often avail themselves of this stipend in order to perfect themselves further in their profession. The faculty of law covers at least four years and gives special attention to the codes and to the organization of the judiciary in Norway. The candidate for legal honors is supposed to pass both written and oral examinations—but not to write a thesis—in law in general, the penal code, methods of procedure, law of property, legal processes, Roman law, and political economy. The faculty of medicine has laboratories and clinics, which are quite in consonance with modern science, each specialty being well represented. Its courses occupy six to eight years and lead, not to the doctorate, but simply to the title of *læge* or physician. The faculty of theology is carried on in a similar manner to the Protestant faculties in Germany, the course covering at least four years, and a written examination being required for a degree. The faculty of historical and philosophical sciences includes in its courses psychology, metaphysics, philosophy, logic, Romanic and Germanic literature, Finnish and Semitic languages, Latin, Hebrew, Greek and Scandinavian tongues, English philology, Egyptology, history—ancient and modern—history of art, archæology, and the physical and political geography of Europe. The faculty of mathematical and natural sciences requires of its stu-

dents who intend to teach an examination in mathematics and astronomy, physics and chemistry, natural history and geography, Scandinavian languages, and German, French, and English; the examination in the last two groups and in geography is similar to that of the historico-philosophical faculty.

Special schools include agriculture, drawing, and sailors' schools. The courses of study are not clearly defined. The sailors' schools receive subsidies from both the Government and the community and are intended more especially for older pupils who have passed through the primary schools. Sunday schools might in a sense be classed under this head, as they serve to teach the adult population whose early education may have been neglected. The course includes the ordinary branches, with religious instruction and the reading of portions of Scripture. The agricultural schools are supported by the provincial authorities. Norwegian authorities also support a military high school, military naval school, and six navigation schools. Technical elementary schools for young men are also reported, in which schools trades are taught and both a theoretical and a practical education is given. Industrial schools for girls include regular lessons in needlework, and in the cities instruction in domestic industries, such as baking, washing, ironing, and mending. The courses of study in these various schools are not presented, but it is well known that even the humblest peasants receive a training which gives them self-reliance and self-respect, and the sons of peasants may receive a university education, so few are the restrictions to such a course.

SCHOOL MANAGEMENT AND METHODS OF DISCIPLINE.

The management of elementary schools depends in the main upon the school board of each locality, which is supposed to look after the interests of the schools, and to report to the higher authorities as to matters in general and as to the funds needed for carrying on said schools. As before stated, a board of inspection examines into the needs of certain groups of schools, and the teachers form a council for the immediate discussion of educational matters. School superintendents pass from one locality to another, visiting the educational institutions of each, and thereby giving information as to the special needs of each section, the methods employed, and the necessity of improvement or change of base in different parts of the country. The local school boards have the power of regulating the hours of school and the plan of instruction, but the meeting together of the teachers as a body or council for the discussion of school affairs places the general management of the schools under their jurisdiction. The children have a right to gratuitous instruction during a seven-year period, although in certain localities there are schools which receive both pay and free pupils, those who are able to give school fees receiving instruction in the morning, while in the afternoon the free pupils come in for a similar

grade of instruction, so that a visitor, unless told, does not perceive any difference in the methods of instruction, but simply observes that different pupils frequent the classes. Absenteeism, unless for cause, brings upon the pupil a reprimand and in case of further neglect of school duties the parents are notified, and a continuance of the same absence leads to a fine being imposed upon parents or guardians. In rural districts the school authorities endeavor to have the children of school age, in sparsely settled districts, attend the *Omgangs skole* nearest their home. In other rural communities they naturally gravitate to the nearest stationary school. In case of the poverty of the parents free text-books, and even clothing, may be distributed among the children who otherwise would not receive full school privileges.

Corporal punishment, as already stated, is permissible in Norway, but it can only be given after consultation with the school authorities, and in presence of some one of them, while on no account is it to be inflicted upon a girl over 10 years of age.

The school is to be opened and closed with prayer, reading of psalms or singing; an eminently religious element is to be inculcated in all schools, the object being, as heretofore stated, to give a Christian education. The text-books to be employed must contain nothing contrary to the laws governing the country, and no religious text-books can be employed other than those approved by the King. The instruction must be given in the Norwegian language, although in the Tromsøe district text-books in the Lap and Finnish tongues may be used side by side with those in the Norwegian language.

The promotion of pupils takes place from class to class, and after the requisite examinations from grade to grade. The public examination of all pupils takes place once a year, in the presence of the school committee, the parish clergyman, and others. All children over 9 years of age are expected to take part, even those who receive home instruction or attend private schools. The pupils usually decide when in the middle or intermediate schools whether they will follow the course of study of the Realschools, leading to practical life, or whether they will adopt the gymnasial course, which fits more strictly for the university; although, as above stated, pupils from all these schools are admitted to university faculties.

The methods of study and recitations are similar to those of Sweden and other countries. The laws imply that 50, or at most 55 minutes, is long enough for the first recitation and 45 or 40 minutes for later recitations. The study and recitations must be interspersed with recesses, gymnastic exercises, and singing, so that neither body nor mind become too fatigued.

The school programmes, which are left to local school boards, are regulated by law of 1889, which says that the programme for each school in town should include the number of classes, the rules for admission, and for passing from class to class; the annual examinations;

the number of studies to be pursued; the programme of studies and hours of work; the extent of religious instruction, which should inculcate knowledge of sacred history, with the most important events of church history, and knowledge of the catechism according to the Lutheran faith; order and discipline of school; the prayer or psalm-singing at commencement of the school or at close of recitations; the hours of recitations for the morning and afternoon sessions, and the time set apart for recess; school vacations; regulations appertaining to graduation examinations; form of certificate or diploma; the school inspection, etc.

As in the city schools, the same law governs rural school programmes, which should indicate the plan and hours of study, order and discipline, hours of recreation, extent of religious instruction, regulations concerning examinations, certificate of graduation, etc.

SCHOOL ORGANIZATION.

The fine school buildings throughout Norway are said to always attract the attention of the traveler, and in the towns they are often the most conspicuous structures. As in the other Scandinavian countries, the buildings are large and well ventilated. There are broad stairways, well-lighted rooms, the light coming in most cases from the left side. The buildings are heated by furnaces; each class has sufficient space for hanging the outside garments; there are recitation, lunch, and class rooms, a room for the head teachers, spacious courtyards for both sexes, and rooms or buildings for gymnastic exercises. Special endeavor is made by the authorities to have healthy rooms, and before permission is given to erect new school buildings the plans must be approved by the local school board, the municipal council in cities, and the committee on hygiene of the locality; and even then the matter is referred to the higher school authorities, and the board of hygiene and sanitation can prohibit the erection of any school building whose plan is not satisfactory to them. This board has also the power to condemn buildings or class rooms which are in an unsanitary state. The law of 1889 is clearly expressed in regard to this matter. It states that in city or town schools the school rooms in which the primary schools are housed must be sufficiently large for the purposes required. Each school is to have the necessary furniture and school apparatus and a court for recreation purposes. The plan of construction of each new school should be submitted to the commission for hygiene and sanitation and to the higher inspectors in charge. The commission ought also to be consulted in regard to other buildings intended for school purposes. No building should be employed for school purposes which is not favorably reported upon by said commission. In order to have control of the sanitary condition of the schools, the school board should engage a physician to look after such matters, if the municipal authorities permit.

In rural districts each school should have a separate building, or in

the pupils are limited to twenty, ambulatory schools may be carried on. The commission for hygiene and the board for higher inspection must look after the construction of new buildings according to the best sanitary conditions, and in the rental of buildings the matter of sanitation must be rigidly enforced. Each school is to have the necessary school furnishings and apparatus.

The buildings generally have the desks arranged for two persons each. Each school, or, when the school is divided into different classes with different instructors, each class should have a room sufficiently spacious and provided with all necessary material for the instruction given. The maximum is 40 pupils for a class, although sometimes as many as 45 are taught together, but in the elementary division the law specifically states that 35 pupils are as many as should be accredited to one class.

The hours of school vary somewhat; in the two lowest divisions they usually average 30 to 36 hours a week in the country, but in the city the average is 24, and this may be diminished to 18, if circumstances make it advisable and the school authorities so decide. In the middle schools the average is 30 hours, and, as above noted, the bill for reform in secondary instruction gives from 30 to 36 hours a week in the gymnasias and Realschools, the highest number including, however, gymnastic exercises, singing, etc.

The schools close on Saturdays; on other days not over 6 hours in school are allowable by law, and 5 hours for girls are considered sufficient by members of the commission appointed to investigate as to overpressure.

The recesses vary, as in other countries. Three recesses are usually given, two of 10 minutes each, and one of 20 minutes. The holidays and vacations amount throughout the year to 12 weeks, although they may be extended to 16 weeks in cities if the authorities so decide.

School attendance is compulsory for at least 12 weeks each year for all children in the country districts from 8 years of age to confirmation, and from 7 years to confirmation in the towns.

According to the law of 1889, which in a measure only emphasizes preceding laws, each school is to have the necessary furnishings and all indispensable school material. The Norwegians are so intent upon giving instruction to all children that in case of poverty of the parents the authorities furnish text-books and the necessary clothing, so that school privileges may be accorded to all of school age.

SUPPLEMENTARY INSTITUTIONS.

The important scientific collections at the university, the university library of many thousand volumes, a botanical garden, and a magnetic and astronomical observatory may be classed as aids to education.

Among the societies which give material aid to progress is the "Kongl-Norske Videnskabs Selskab i Christiania," which publishes

an annual report of its proceedings, the octavo volume being made up of many admirable papers in the sections for mathematics and natural sciences, and for history and philosophy.

The Society of Friends of Work during Lost Hours has for its aim the propagation of teaching manual training of different kinds, so as to occupy children during hours when they are out of school, as well as to furnish them the means of gaining a livelihood outside of any profession which they may take up, or so that during winter evenings they may be able to do something which will add to their funds. The society has founded a sort of normal school at Christiania, where children and female teachers go to improve themselves in such training. There were 400 persons under instruction in 1888.

*Schools for special classes.*¹—Schools for special classes are reported as follows: Norway has only occupied itself with the education of the blind since 1860. In 1888 instruction is reported as obligatory for that class and national institutions have been founded (law of July 8, 1881). According to the most recent statistics there are in Norway 160 blind persons between the ages of 7 and 21 years. Each blind child of more than 9 years of age may be admitted gratuitously into state institutions provided for them. An institute in Christiania receives 51 pupils, 32 boys and 19 girls, and the methods pursued are as follows: Recitations and meals in common, games and promenades in separate groups, special attention given to manual training, perhaps less to music than is found in some similar schools in Denmark, Fröbellian exercises much in favor. The instruction is divided into three courses covering 28 hours a week for the first course, 30 hours for the second and third courses. The division by study is as follows: Religious instruction and reading psalms, 6 hours; history, geography, natural history, reading, and singing, 2 hours each; poetry, dictation, arithmetic, and gymnastics, 3 hours each. The course in normal training includes, among other things, carpentering, wood-carving, chair-caning, turning, varnishing, and polishing table legs, etc.; the girls have wood-carving, embroidery, cutting out garments, weaving linen, knitting, making brushes, baskets, etc.

The education of the deaf and dumb dates from 1825, when a national institute was created in Trondhjem. In that institute the sign method was practiced; in 1848 a second institution was established in Schaff-telløkken, a suburb of Christiania, which from the beginning had the articulation method. Several private institutions which received State subsidies, some of them *externats*, but all employing the articulation method, were established from time to time. Finally, a law of June 8, 1883, rendered elementary instruction obligatory for the deaf-mutes and required them to attend school from the seventh to the seventeenth year, the course of instruction to be similar to that of the elementary

¹ Rapport de Mlle. Matrat au Ministre de l'Instruction Publique [France].

grades, with the learning of a trade added. In 1888 there were nine such schools, all of which, with the exception of the free institute at Trondhjem, instruct according to the articulation method. The sign language is used at Trondhjem, but is reserved for those pupils who have passed the school age and who are lacking in intellectual development. There are about 600 deaf and dumb persons in Norway from 7 to 20 years of age. The institution at Schafftelökken, which is installed amidst rural surroundings on a height overlooking the Bay of Christiania, has 70 pupils of both sexes and admits *externats*. Instruction is purely oral and for the highest class, the eighth, it includes religion, Norwegian grammar, reading exercises and poetry, arithmetic, history, geography, natural history, drawing, gymnastics; in the lowest, or first class, religious exercises, articulation, and training the powers of observation. Manual training is developed to the point of being considered as the basis of a trade or profession.

A law of 1881 renders instruction obligatory for such imbeciles as are capable of being taught, but although there are 1,660 idiots in Norway the schools are not sufficient for that number. A school of this class for girls, situated at Thorksang, a suburb of Christiania, is maintained by State, departmental, and communal subsidies. Founded in 1876, it had 135 pupils in 1888. The building is a fine one, with 33 rooms, among them 16 class rooms, all well furnished with desks suitable for one person, which are arranged in a semicircle. The school material consists of pictures of plants, animals, landscapes; plaster casts suitable for instruction in drawing and to train the artistic sense; Swedish gymnastic apparatus in one room for the children when tired of sitting; all kinds of material tending to instruct for the practical side of life; a model of a town house of several stories appropriately furnished; a peasant's house, a stable, a kitchen, a dairy, all large enough so that the children get a thorough conception of such establishments; specimens of the animal creation in relief; grocers' and drapers' establishments, where they can learn to purchase articles, count money, etc. The theoretical side of the teaching includes religion, the mother tongue, reading, writing, arithmetic, drawing, singing, gymnastics, history, and geography. The professional side includes that of machine and hand sewing, mending, crocheting, knitting, weaving, basket-making, etc. Those who are not intellectually developed to the extent of the above instruction are simply taught color, form, numbers, and whatever may give them an insight into practical life. Festivals, dances, and other pleasures are given several times a year in large rooms well arranged for such purposes. An asylum for epileptic children and a normal course to prepare special teachers are annexed to this institution. A similar school for boys and another at Trondhjem, with a fourth school which was to be opened in 1889, completed this class of schools.

Asylums are established in many towns where little children from 2 to 7 years of age are not only taken care of but also instructed in the

first elements. These asylums are supported partly by public funds, but chiefly by voluntary annual contributions. The amount applied to the support of asylums in the country is not estimated at more than 6,000 specie dollars.

MEMORABLE DATES.

- 1536. Reformation gave first impetus to education, although not creating a systematic public-school system.
- 1736. Royal decree providing that no children be admitted to confirmation who had not been instructed in the elements of Christianity.
- 1739. Promulgation of school law, based on this provision.
- 1741. Modifications requiring the establishment of a school in each district.
- 1811. Founding of University of Christiania.
- 1814. Establishment of constitution of Norway, the Storting first interesting itself in the furthering of educational progress.
- 1824. Organization of the university faculties.
- 1827. Promulgation of school law dividing elementary schools into rural and urban schools, each having its own legislation. It also provides for the establishment of normal schools in the different dioceses.
- 1848. Law in regard to city schools, regulating the supervision, expenditure, number of schools, obligatory instruction, courses of study, teachers' salaries, etc.
- 1860. Law in regard to country schools, regulating administration, expenditures, length of school vacations, school age, and also establishing practice schools for teachers in connection with the higher elementary grades.
- 1869 (May 22). Additions to law of 1860, permitting the employment of women teachers in lower grade elementary schools.
- 1869 (June 17). Law regulating secondary education, the courses of study arranged so as to determine the precise status of the middle schools and gymnasia.
- 1869 (July 31). Decree fixing course of study for the six normal schools of the different dioceses.
- 1869 (November 6). Highest administration of higher public schools conceded to department of ecclesiastical affairs and education.
- 1870. Regulations for course of study in middle schools issued by department of ecclesiastical affairs.
- 1873. Law for public elementary schools in rural districts, supplementary to laws of 1860 and 1869, respecting subsidies to school or locality from State or local sources.
- 1878. Law for public elementary schools in rural districts, supplementary to laws of 1860, 1869, 1873. Includes possible additions to salaries of teachers and assistant teachers from governmental funds. Admits women to graduation examinations from the middle schools.
- 1881. Law appertaining to elementary schools, supplementary to earlier laws. Creates sufficient number of schools for the instruction of the defective classes.
- 1882. Law permitting women to enter for the *examen artium* and *examen philosophicum*.
- 1885 (March 1). Courses of study in secondary schools changed from plan of 1870.
- 1885 (December 22). The department of ecclesiastical affairs given the power to admit girls as pupils in the public schools providing such admission does not interfere with the instruction or discipline.
- 1883, 1885, 1886. Decrees concerning admission to the *examen artium* of gymnasia and Realschools, prerequisites of study, place and time of examination, etc.
- 1889. Law reorganizing elementary education in both urban and rural districts, the appointment of teachers being left to local boards, as also the plan of instruction.

- 1890 (January 18). Law for the protection of children, girls, and women employed in manufactories; children of school age not to be employed during the hours required for instruction nor during the hour immediately preceding such instruction, the employers being obliged to procure certificates from teachers indicating the regular attendance of such children in school; the hours of work to be limited so as not to interfere with the required teaching.
- 1890 (September 13). Bill, sanctioned by the King, dealing with modifications of the plan of study in secondary grades; more time to be given to modern languages and less to ancient languages.

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CHAPTER XV.

EDUCATIONAL SYSTEM OF DENMARK.¹

[Constitutional Monarchy: Area, 14,124 square miles; population, 2,185,159 in 1890; capital, Copenhagen; population (without suburbs), 312,387; Minister of Ecclesiastical Affairs and Public Instruction, A. H. Goos; Chief of the Division of Education, A. F. Asmussen; Chief of the Royal Archives, A. F. D. Jørgensen; Chief of the Royal Library, Dr. C. W. Brunn; Chief of the Museum of Antiquities, C. F. Herbst; Director of the Academy of Fine Arts, F. Meldahl.]

INTRODUCTION.

The constitution of Denmark was originally embodied in the organic law of June 5, 1849; it has since undergone various revisions, the most recent being through a statute which received the royal sanction July 28, 1866. This constitution is based on the most liberal principles; the king shares his power, which had been hitherto wellnigh absolute, with a diet (*Rigsdag*) of two houses (*Landsting* and *Folksting*), both elective. The *Folksting* discusses the budget and other public questions; the *Landsting* attends to the local affairs of the provinces. The State religion is Evangelical Lutheran; it was introduced in 1536, the church revenue having been seized at that date by the crown, to be delivered up to the university and other religious and educational establishments. The King must be a member of that church; religious affairs are under the superintendence of seven bishops, who have no political functions. Ninety-nine per cent of the entire population is Lutheran, though complete toleration is enjoyed.

Denmark is divided into provinces, *Amt* or counties, and parishes. The centers of population, Copenhagen excepted, are the *Kjøbstaeder* or cities, which number sixty-six, the principal ones being: Odense, on

¹Prepared by Frances Graham French, specialist in the school systems of northern and eastern Europe.

the island of Fionia; Helsingör, in Seeland; Aarhus, Aalborg, Randers, Horsens, and Viborg, in Jutland. The provinces, which vary in size from 221 to 9,597 English square miles, are divided into eighteen counties or *Amter*, which are subdivided into sixty districts, and these again into numerous school districts (in 1867 there were 2,399; of these, 1,081 in the islands and 1,318 in Jutland). The seven provinces correspond to the church dioceses; three are on the islands and four on the mainland.

Iceland, the chief dependency of the crown, has its own constitution and administration by a charter of January 5, 1874, which went into operation August 1, 1874, and by the terms of which the legislative power is vested in the *Althing*. A minister for Iceland, appointed by the King, is at the head of the administration, while the highest local authority is vested in a governor-general. There are also two *Amtmænd*, or under governors, for the northern and western districts of Iceland.

HISTORICAL SKETCH.

The convent and cathedral schools, which date from the introduction of Christianity in 965, were but the forerunners of the famous Latin schools established in Viborg, Ribe, Odense, and Copenhagen for clericals and laymen of the higher classes. The Reformation period brought about the establishment of two grades of Latin schools, which were under clerical supervision, and admitted students from both urban and rural districts to the three or four classes into which they were divided. A third class of schools—the *scholæ vulgares*, *Skrievskoler*, or writing schools—omitted Latin, and were under the supervision of municipal authorities. The schools at the commencement of the sixteenth century were almost entirely city schools; the country population had almost no instruction, unless possibly in the catechism from the Sacristan or *Degn* of the parish, who brought together the neighboring children of a rural domain or *gaard*. King Frederic IV (1699-1730) was the first ruler to seriously give thought to the organization of people's schools. In each of the twelve districts which were dependencies of the crown he established twenty schools, each with a school room and a lodging for a teacher, who was to give instruction in religion and reading in exchange for a moderate salary and lodging. This plan of establishing schools was soon followed by members of the nobility, so that on many estates the children of the tenantry were being taught the rudiments, under the supervision of the clergy. A royal decree of 1721 regulated the organization of such schools, fixed the teachers' salaries, made religion and reading obligatory branches, writing and arithmetic optional branches, and required children between 5 and 8 years of age to attend school daily from five to six hours; after that age half a day's schooling was considered to be enough.

During the reign of Christian VI (1730-1746) city schools were reorganized. Elementary instruction was rendered obligatory by a decree of January 23, 1739, and new schools were organized in rural districts. A decree of the same year required the establishment of common schools in all the large villages; in which schools religion, reading, writing, and arithmetic were to be taught by persons whose qualifications had been verified by the clergymen of the vicinity. The support of such schools depended on a revenue fund, school taxes, contributions, and fines. Several of the Latin schools mentioned above were closed and their funds were used for these lower schools, and the course of study in the remaining Latin schools was extended, and the Danish language, instead of the Latin, was made a principal study. Although the eighteenth century was marked by many efforts to extend the system of instruction, dissensions occurred among the landed gentry, who preferred to maintain each his own set of schools, and who oftentimes employed incapable persons living on the estate, which prevented the success of this attempt at a school system, especially as many of the peasant class were merely vassals of these seigneurs, who cared but little to have them taught. But during the reigns of Christian VII and Fredric VI great reforms were inaugurated. Servitude was done away with in 1788; the first normal school was established in 1790-'91, at Blaagaard near Copenhagen (transferred to Jönstrup in 1809); and two decrees were promulgated July 29, 1814, which regulated the organization of elementary instruction in rural and urban districts, Copenhagen excepted. These decrees, whose principal features are still in force, established two-class elementary schools in rural districts, in localities rich enough to maintain such schools, and two schools in each of the larger villages. If feasible, burgher schools, higher grade schools, and evening classes for adults were to be added, and obligatory attendance in elementary grades was recognized as a feature of the school system. At about this date (1814) five schools for the training of teachers were established in sections of the country away from the central normal school, which dated from 1791, *i. e.*, one at Skaarup, in the island of Fionia, and three at Lynby, Ranum, and Jelling, in Jutland. Modifications of the law of 1814 were made from time to time; in 1828 gymnastics were introduced in all the schools of Denmark; in 1838 many higher grade schools were created; in 1850 changes were made in the form of secondary schools, some of which were transformed into gymnasia while others were changed to Real schools. Laws of 1844 and 1857 applied more especially to the schools of Copenhagen; those of 1855, 1856, and 1864 related to the urban and rural schools, with the exception of Copenhagen. The decrees or laws of 1850, 1864, and 1869 regulated the examinations for admission to the university of Copenhagen, which was founded in 1478-'79. A royal decree of January 27, 1860, fixed the minimum of school attendance at 240 days of 6 hours each. Regulations which

applied to the training schools for teachers were dated February 10, 1818, February 15, 1857, and January 12, 1858.

In Iceland, which became subject to Denmark in 1380, the first school can be traced to 981. Few if any illiterates are to be found in that or any other Scandinavian country, for in Iceland the clergy are forbidden to act at the marriage ceremony of any woman who can not read. Education is universal, and the intellectual attainments of the people are of a superior order. The college at Reikiavik has a corps of six or more teachers, who instruct about one hundred pupils in Latin, French, German, and theology. This is the only public school of high grade reported in that dependency, but there are still other schools, and many valuable works of European literature have been translated into Icelandic for popular use.

SCHOOL SYSTEM.

The present school system of Denmark, based upon the decrees of 1814, is an establishment of the State, which early recognized the need of obligatory instruction for all children between 7 and 14 years of age. Religious instruction being a main element in the schools, the study of the Bible, the catechism, and the Psalms being objects of daily lessons, and confirmation being the local act which closes the school period for children, the general supervision of schools is naturally in the hands of the clergy. The law of 1814 indeed exacts that school directors be candidates in the theology. The educational institutions have reached a high degree of perfection, and are all dependent upon and under the control of the University of Copenhagen. The law (1814) makes it obligatory on all parents that their children should attend school or receive similar home instruction, fines or imprisonment being the penalties imposed in case of nonobservance of the law. The circumstance that certificates of confirmation are indispensable to those who wish to enter the public service, to serve an apprenticeship, or to enter the marriage state, has of itself the effect of making school attendance nearly universal, so that illiteracy is almost unknown. It belongs to the State to see that each commune is provided with suitable buildings for the needed education, but gratuitous instruction is limited to those who can not, or will not, pay for such instruction. The schools are divided into (1) elementary—which in the larger cities are of two classes, pay schools (*Betallings-skoler*) and free schools (*Friskoler*), and in the country include ambulatory schools (*Biskoler*) and people's higher schools (*Folkehoiskoler*); (2) secondary schools, including *Realskoler*, *hoiere Realskoler*, or *lærde Skoler*, i. e., pay schools above the elementary grades, fitting for practical life and a higher classical school, the so-called learned schools; (3) normal schools (*Seminarier*), for the instruction of men only, such schools for women not having been established as yet, although the subject is freely discussed; (4) the university, with its legal, medical,

philosophical, and theological faculties; (5) and, lastly, special schools, such as technical and polytechnic schools, veterinary and agricultural schools, schools for the defective classes, navigation schools, and an academy of fine arts. As adjuncts to the elementary grades, there are infant asylums, drawing schools, Sunday schools, and evening schools for adults. There are also private schools, for both sexes, in the large cities.

State and local control.—The Minister of Ecclesiastical Affairs and Public Instruction is at the head of the educational system of the Kingdom. His special aids are the bishops, who visit the schools in their respective dioceses, reporting annually to headquarters; and two general inspectors—one for music the other for gymnastics—for the whole Kingdom.

The local officers who keep the minister informed, either directly or indirectly, as to educational affairs throughout Denmark, are the county school boards and school councils, the district school boards, and the communal council and special school committees in the various wards in cities, and in the parishes of rural districts. The special attributes of these various officials are presented under supervision and administration.

Maintenance.—For the maintenance of elementary schools each county has a school fund, formed by an annual state appropriation, by revenues from ancient foundations, and by city and district taxes. This school fund is employed for such expenditures as the districts can not easily meet, *i. e.*, for extra pay to teachers, teachers' pensions, people's high schools, drawing schools, etc. The main support of the elementary schools depends, however, upon the district funds, which are employed for the construction of school buildings, the purchase of school apparatus, pay of teachers, etc.

Normal schools are maintained by the state. Secondary schools have for years had their own funds, and consequently do not require aid from the state. The university also has its own funds, although all these higher grade schools receive certain subsidies for specific purposes.

STATISTICS.

With a population in 1890 of 2,185,157, the pupils enrolled in city and rural schools in Denmark numbered 231,940, or about 10 per cent of the population receiving the foundation of an education. In 1881 the illiterates to 100 recruits numbered 0.36; in Sweden at that date, the per cent was 0.39.

The statistics of schools of all grades in Denmark can not be presented for a late date, as the minister of public instruction has not so far given to the public any general statistics appertaining to the different grades of education in Denmark.

The city of Copenhagen presents, however, the following statistics for the four years 1886-1890:

Schools under the jurisdiction of the school authorities.

	No. of schools.	No. of boys.	No. of girls.	Total.
At close of the year—				
1886.....	145	15,138	16,329	31,467
1887.....	140	15,819	17,249	33,068
1888.....	130	16,619	17,681	34,300
1889.....	128	17,324	18,490	35,814
1890.....	122	17,589	19,175	36,764

Subdivision by schools.

	At the close of the year—		Increase.
	1886.	1890.	
Number of pupils in free schools	14,155	19,007	<i>Per cent.</i> 34.3
Number of pupils in pay schools	7,879	9,588	21.7
Number of pupils in schools who have their own property	749	734	*2.0
Number of pupils in schools which, in addition to their own means, have aid from societies	1,731	1,803	4.2
Number of pupils in schools maintained by school fees	6,953	5,632	*23.5
Total	31,467	36,764	16.8

* Decrease.

Number of communal schools.

Free schools.	At close of year—				
	1886.	1887.	1888.	1889.	1890.
Number of schools.....	15	15	16	17	17
Number of classes	457	497	539	565	610
Number of hours of instruction	12,873	13,994	15,155	15,875	17,119
Number of men teachers.....	199	234	247	267	280
Number of women teachers	218	250	266	276	301
Number of boys	7,378	7,983	8,645	9,101	9,717
Number of girls	6,777	7,549	8,116	8,653	9,290
Total number of pupils.....	14,155	15,532	16,761	17,754	19,007
<i>Pay schools.</i>					
Number of schools.....	7	7	7	8	8
Number of classes	263	273	279	306	316
Number of hours of instruction	7,745	8,038	8,212	9,010	9,319
Number of men teaching	122	139	139	157	159
Number of women teaching	129	137	141	157	155
Number of boys.....	4,235	4,371	4,590	4,921	5,040
Number of girls.....	3,644	3,905	4,144	4,428	4,548
Total number of pupils	7,879	8,276	8,734	9,349	9,588

At the close of 1890 there were about 5,000 children in school who were not under the school board, so that the total number of the school children was 41,800. The expenditure for these schools amounted to \$289,500. The tuition fees reach \$2,123. In 1880 there were only 13,838 pupils reported in the Copenhagen schools, in 448 classes, so that

the increase in six years, owing in part to the new buildings erected, was 8,200 pupils in 271 classes. The teaching force of the Copenhagen schools comprises 619 members—291 men, 328 women, the infant classes only being under the charge of women. The salaries vary. For the men they range from \$270 to \$482; for the women from \$270 to \$308. The schools of Copenhagen have about 800 classes, with an average of 31 pupils to a class. The expenditure for each pupil amounts to 50 crowns (\$13) annually, which is about \$1.07 per capita of the population of the city. Each school has its inspector, its vice-inspector, and vice-inspectress, a corps of regular teachers, and also special teachers for singing, gymnastics, drawing, and woman's handiwork. The large and well-arranged school buildings, erected between 1846 and 1887, averaged in cost \$47,600. Each school has an average of twenty class rooms, a gymnastic hall, and lodgings for the inspector, the inspectress, and the janitors. The schools are six-class schools, with continuation classes for those who desire to pursue their education still further. Such pupils obtain instruction in German and bookkeeping.

A special class of schools, founded in Denmark in 1840, called the *Folkehoiskoler*, or people's high schools, are designed to elevate the standard of education among the rural population and make the peasant classes acquainted with national history and literature. Similar schools are reported in both Sweden and Norway, and in all three countries they are recognized as especially valuable to those who live in rural districts. The majority of the pupils in these schools are from 17 to 30 years of age. The young men attend school from November till April, the young women from May to August; a few of the schools have both sexes together. The *Folkehoiskoler* differs from the ordinary continuation school, as it does not continue the studies of the elementary grades, but aims to broaden knowledge and to cause them to realize that they have only taken the first steps in education. The eminent pedagogue, N. F. S. Grundtvig (1783-1872), is looked upon as the founder of these schools, although he never had charge of any. His idea was to awaken the feeling and thought of the people. The first school of this class was established in 1844 in Rödning; they developed in 1879 to a class of free people's academies with several years' course of instruction. The number of the people's higher schools is said to be seventy, although this is really an approximation, as there are special and continuation schools which are so similar in character that the difference is not easily discernible. They are attended by 2,899 men and 1,595 women. According to age of students the statistics are as follows: 15 to 18 years, 503 men and 284 women; 18 to 25 years, 1,890 men, 1,053 women; over 25 years, 506 men, and 258 women, but this number did not include 112 male students at the continuation school in Askov. Of the 4,494 pupils 955 had already taken a course of study and had returned to continue their education.

The state schools¹ which afford a classical education are the Metropolitanskoler in Kjöbenhavn, 7 Katedralskoler in Roskilde, Odense, Nykjöbing near Falster, Aarhus, Aalborg, Viborg, and Ribe, and the schools of Randers, Horsens, and Hilleröd (Frederiksborg lærde skole) and the Sorö academic secondary school (Sorö Akademie lærde Skole²). The number of pupils in the above-enumerated public schools was 1,863 in the year 1890. Statistics of attendance for the past fifteen years indicate an increase from 1,110 pupils in 1875, to 1,719 in 1882, and a gradual decrease from 1,965 in 1886, to 1,863 in 1890. The 17 private lærde skoler or secondary classical schools include the Westenske Institut, the burgher schools of Christiansands and Copenhagen, 12 Latin og Realskoler, a lyceum which was formerly a Latin and Real school, but has now changed its form somewhat, and another four class school—the Efterlægts-Selskabets skole, which is under the control of a society. These schools were established at dates between 1850 (that of the Westenske Institut) and 1887 (that of the Helsingör Latin og Realskole). In addition to the above classical or lærde skoler, which prepare for the university or a professional career, there are 11 communal Real schools, 7 special Real schools at Kjöbenhavn, Odense, Hjöring, etc. There are also 36 private Real schools and 15 Real schools for women, all of which are in a manner preparing pupils for examinations to enter higher grade schools. There are in all 98 schools which prepare for the Real examinations, and 69 of them are exclusively Real schools, or secondary schools leading to practical life. The courses of study and organization of these higher grade schools are enumerated under the proper headings.

The university averages about 1,000 students annually in attendance in its five faculties. In 1877, there were 963 students registered; in 1878, between 836 and 947 in the different semestri; in 1880, first semester 931, second, 1,057. In 1881 a slight decrease was manifest, *i. e.*, 867 students in the spring term, and 1,040 in the fall term. Later advices bring the number up to about 1,300 students. Connected with the university is the polytechnicum, or Polytekniske Lærestalt, which had in its classes from 338 to 295 students in 1890-'91. Its course of study is presented under the appropriate head.

The technical school of the scientific society in Copenhagen—which is a pay school, but with numerous scholarships maintained by the Ministry of Public Instruction, the city, and the society—is frequented annually by about 2,000 pupils. Its five principal divisions are (1) the evening school, where, from 4 to 10 p. m., during the months from October 1 to July 1, instruction is given in the common branches, natural and physical sciences, drawings of all kinds, modeling, sculpture, landscape gardening, theory of colors, chemistry of constructive material,

¹ Retsregler for det højere skolevæsen i Danmark.

² The Sorö Academy was founded in 1580; changed to Ringht's Academy in 1749; a strictly classical school since 1849.

etc.; (2) the day school for mechanical and constructive work, combined with the ordinary branches; (3) the school of painting and sculpture from art and nature; (4) the institute for metal workers, repoussé work, modeling in wax, etching and engraving; (5) and the school of industrial arts. This school is really the cradle of all art and manual training schools of the country.

A similar special school of art training for women has an annual State subsidy of \$2,144 and is annually attended by from 400 to 500 pupils who receive instruction from 12 professors under the direction of five members of the Academy of Fine Arts. This school has quite a practical character, its courses aiming more especially to train women to be self-supporting by means of art and industrial work, which is often ordered and frequently purchased by outsiders at an annual sale. The three courses comprise elementary instruction, industrial arts, and decorative arts, which include geometric, stereometric, and perspective drawing, aquarelles, painting on porcelain, history of the fine arts, wood carving, engraving, copperplate, anatomical studies, etc., as well as most branches of industrial arts.

Statistics of other special schools are not presented in any of the material now on file in this Office, except in the case of a few institutions which are either intended for the defective classes, are under the control of various societies, or purely of a private character. These are presented under the head of supplementary institutions, as they do not generally come in for a share of the regular school fund.

FINANCE.

Denmark ranks as one of the most advanced countries in Europe in point of expenditure for elementary instruction. The expenditure for each inhabitant averages \$1.54 throughout the kingdom. Financial affairs, as far as they appertain to schools, are placed under the supreme control of the minister of public instruction; the main support of elementary schools depends upon county or district funds, with certain governmental subsidies for stated purposes. The normal schools are maintained entirely by State funds; the secondary schools and the university have their own funds, and are consequently not dependent upon the annual amounts voted for the ministerial budget by the Rigsdag. The district or communal authorities vote the necessary funds for construction and repairs, heating, and purchase of school material and for teachers' salaries in the elementary schools of their respective localities. The annual increase of the salaries of teachers, their pensions and those for the widow and orphan are taken from a school fund in each county, which fund is also used for the maintenance of the peoples' high schools, drawing schools, etc. This county school fund is formed by an annual subsidy from the State, divided among the counties, from revenues from taxation and contributions. It is under the direct control of the county school board and the school council;

the school board meets each year to determine the amount requisite for the coming year; the school council sanctions its decisions if favorable.

The receipts and expenditures¹ under the control of the minister of ecclesiastical affairs and public instruction in 1886-'87, which is the latest date obtainable, were as follows:

	Receipts.		Expenditures.		Active funds after settlement of accounts.	
	Crowns.	Dollars.	Crowns.	Dollars.	Crowns.	Dollars.
University of Copenhagen	369,671	99,071	516,131	138,323	889,808	238,468
Legacies, etc.					2,908,784	773,554
University subsidies	393,429	105,498	206,989	55,472	5,217,936	1,398,406
Polytechnic school	72,650	19,470	72,650	19,470		
Academy of Sorø	512,186	137,263	433,031	116,052	9,120,727	2,444,354
Higher classical schools	545,737	146,227	719,943	192,944	2,066,751	553,887
Normal schools	132,490	35,514	132,490	35,514	37,922	10,161
Institutions for the deaf and dumb	201,163	53,911	201,163	53,911	142,446	38,173
Institutions for the blind	81,381	20,810	81,381	20,810		
Academy of Fine Arts	61,843	16,573	60,782	16,289		
Scholarship funds	12,000	3,216	12,000	3,216		

There are also separate funds in a few of the institutions, which are used for purposes outside of the regular course of instruction. These funds are either State subsidies or emanate from foreign sources. Such amounts are as follows:

	Crowns.	Dollars.
Subsidy from the state for university	50,000	\$13,400
Subsidy from the state for polytechnic school	54,441	14,590
Subsidy for higher people's schools	39,894	10,691
Subsidy for science and arts	84,000	22,512
Subsidy for classical and Real schools	80,692	21,025
Subsidy for Real school only	13,800	3,758
Subsidy for normal schools	116,038	31,118
Subsidy for deaf-mute institutions	135,793	36,392
Subsidy for the blind	76,839	20,449
Subsidy for the Academy of Fine Arts { Budget	52,296	14,015
{ Scholarship	12,000	3,216

The budget of the Ministry of Ecclesiastical Affairs and Public Instruction amounted to 2,476,501 crowns, or \$663,702, in 1890-91, but how much of this sum was for education alone is not presented. The school funds so far presented show, however, that the Danes neglect nothing in their efforts to thoroughly educate all classes.

SUPERVISION AND ADMINISTRATION.

State control.—The supreme control of all schools is delegated to the Minister of Ecclesiastical Affairs and Public Instruction, in whose ministry there are two sections: The one for the supervision of ecclesiastical affairs, elementary, and normal schools, blind and deaf-mute institutions; the other for the supervision of secondary and higher schools, libraries, museums, and academies. In each diocese the Lu-

¹ Sammenlæg af statistiske Oplysninger angaaende Kongeriget Danmark, 1889.

theran bishop is expected to act as aid to the ministry by visiting the schools and reporting annually. An inspector-general for the whole kingdom, in charge of music, and an inspector for gymnastic training complete the list of higher school officers, who, by means of the reports forwarded to them by local officers, are kept advised of educational affairs throughout the kingdom.

Local control.—In each rural commune or parish, and in each town, the administration of public schools belongs to a school commission—*Skole commission*—composed of the pastor, as presiding officer, and of two other members appointed for three years by the communal council. Outranking the school commission, in each district or subdivision of the county, is the school board—*Skole direction*—composed of the Amtmand, or sheriff, of the District Provst, or first ecclesiastical dignitary of the district, and of a third member designated by the school council of the county. The school board—*Skole direction*—of the district generally appoints the teachers, arranges the programme of studies, and chooses the classical text-books, although the teachers are allowed much freedom of action in this matter. The school council—*Skoleraad*—of each county is composed of the members of the county administrative council, or *Amtsraad*, and of several members elected by the towns or cities. The duties of this council appertain almost entirely to the financial questions, as do those of the *Amts-skole direction*, or school board of the county, which is composed of all the school boards of the districts, or subdivisions of the county, under the presidency of the sheriff or Amtmand.

In Copenhagen the school board is composed of the mayor, a member of the aldermanic council, and an ecclesiastical functionary designated by the Minister of Ecclesiastical Affairs and Public Instruction. A director or inspector is especially charged with all that concerns the administration of the schools. He is a consulting member of the school board, which is composed of three members. Each of the wards of the capital has a school committee composed of three members, *i. e.*, a clergyman appointed by the Minister of Public Instruction, a member elected by the communal council, and a third member appointed by the school board. Each public school has an inspector, who is a member of the teaching force, having fewer hours of recitation than his colleagues and receiving higher pay. His special duty is to look after absentees and to call the parents to account for such negligence.

As will be observed, the clergy and the county and district officers are by their very presence on school boards or committees so placed that they become educational factors of the kingdom. The Danes are, as it were, either educators or so interested in advancing education that bishops, sheriffs, aldermen, and teachers proper are all acting as aids to the ministry at headquarters, so that its influence extends to all parts of the kingdom.

TEACHERS.

Training of teachers.—In order to prepare teachers for the position to be occupied, the State has established four normal schools, which give the requisite instruction to men who may be seeking the position of instructor. These normals are situated in Seeland, Fionie, and Jutland. Private institutions are also reported, and for the training of women teachers that of a private institution is the only opportunity offered, although the subject of the regular establishment of training schools for women teachers has been freely discussed of late years by persons interested in progressive educational movements, and the outcome of such discussions will probably lead to the establishment of such schools for women. The normal schools have in general the same organization, a director and three or four professors having charge of the instruction, which is both of a theoretical and practical character. Each school has its gymnastic teacher, who, being a military man in active service, is changed every three years. Generally speaking the directors are ecclesiastics, who hold a curacy in addition to their directorship, the State according them a curate as assistant. The duration of studies is three years, divided into three courses or classes. The age of candidates is from 17 to 23 years, and proof is required that the candidate has followed a practical course of at least one year in an elementary school. Pupils are admitted to these normals after a competitive examination at the close of the school year. The written theses for such examination comprehend dictation, Danish composition, consisting in a recitation, the explanation of a proverb, a suggestion in regard to moral teaching, writing, arithmetical computations, etc. The oral examination covers questions in regard to grammar, grammatical analysis, arithmetical questions, Danish history, universal geography, religion, and sacred history. These normal schools being all situated in rural districts, a model school annexed may open its doors to both sexes. Normal professors preside at the lessons. Pupil teachers of the third year of the course give the instruction.

The normals are not gratuitous; for instance, at Jönstrup \$81 is charged for boarding pupils and \$10 fees are required of day pupils. Children of teachers are admitted free of charge, however. Scholarships are allowed to the amount of \$2,065 annually. The director at Jönstrup has a salary of \$1,305, with lodging and garden. Other directors, being curates also and having day pupils, receive from \$216 to \$324. The professors' salaries range from \$447 to \$640 since 1889, as a ministerial decree of that period raised their salaries. The total expenditure for all normals in 1887 was \$8,009, rentals not included.

Teachers' institutes and conferences are also held, which, by discussions of educational questions, aid teachers in carrying on their educational work. The Sixth Educational Congress of Scandinavian teachers was held in Copenhagen, August 5-8, 1890, over 5,300 teachers

taking part in the discussions. Among the number were 3,000 Danes, 1,100 Norwegians, 1,000 Swedes, and 200 Finns and Icelanders; in all, 3,000 men and 2,300 women. This is stated to be one of the largest congresses ever held in the northern countries. The first subject under discussion was that of religious instruction, the decisions being that less dogma and more church history be taught, but that through a study of the whole Bible, with a teacher who must himself be a believer and Christian, the pupils would be led directly to Christ. A discussion of the object of instruction in school was then taken up, the paper by Prof. Dr. Kroman, of Christiania, awakening much interest, as the speaker laid great stress on the need of a full understanding that the object of school instruction is to educate the child, and not especially to prepare for examinations. The subject of scientific temperance teaching was then proposed as a branch of study for the schools. Next followed a discussion of teachers' salaries, as it was impossible for a teacher to be in the proper spirit for instructing children or having the proper discipline if his mind had to be devoted to petty economies. Physical education as conducted in England, by outdoor sports, next entered into the discussion, the speakers considering that much could be learned from that nation. Coeducation was also favored, as being beneficial to both sexes. Other papers were given on instruction in Slöjd, the mother tongue, and in the Latin language. The teacher was also urged to keep up with the times in regard to Russian, French, and Norwegian literature as well as in regard to other matters of general interest. Special stress was laid upon the preparation for a teacher's position as far as discipline, methods, singing, the care of the deaf and dumb and orphans were concerned. The visiting teachers were in general the guests of people in Copenhagen. Low railway and steamboat rates were obtained and a grand banquet with illuminations, etc., ended a particularly successful meeting.

Examinations.—By law of July 25, 1867, a commission composed of eleven members, appointed by the government, attends to the examination of persons who desire to obtain a teacher's position. Such persons must present themselves for examination whether they have received the diploma of a normal school or not. This commission meets annually in Copenhagen and two other cities of the kingdom.

Appointment.—Teachers are usually appointed to the elementary grades by the school board of the district, according to the suggestion of the communal council and the bishop.

Salaries.—The salaries of teachers vary in different places. In Copenhagen salaries average from \$270 to \$482 for men and from \$270 to \$308 for women; in other cities and in rural districts there is an annual fixed amount, a certain quantity of grain, free lodging, and in the country a piece of ground and wood for fires, which brings up the sum total to an average similar to the above. The authorities also arrange for a gradual increase in pay as the term of service lengthens.

Pensions.—After having taught a certain number of years teachers are entitled to a pension, which amounts to about two-thirds of their salary. To receive such pension the teacher must be at least 30 years of age. There are also funds set aside for the benefit of the widows and orphans of teachers, so that they may not be left in straitened circumstances.

COURSES OF STUDY.

In the elementary schools a certain amount of freedom is left to each teacher in regard to the course of study best suited to the school under his charge, and equal freedom is allowed in regard to the text books used. In rural schools the branches of instruction are reading, writing, arithmetic, religion and biblical history, gymnastics, singing, and the elements of history and geography. In the city schools a more extended course is found, the schools being divided into two classes, those which last all day and those which have from four to five hours instruction only. The course of study in the elementary schools of Copenhagen, which schools serve as a model for the whole country, is as follows, the number of hours a week being given for all the classes in each branch of study, the duration of daily work being from four to five hours. The two schools which are taken as models are those which have the largest attendance, the one a free school; in the other tuition fees are charged:

	Religion.	Danish.	German.	History.	Natural history.	Physical science.	Mathematics.	Reckoning.
Western pay school	146	380	6	65	49	9	2	180
Eastern free school	173	459	10	70	44	5	2	220

	Writing.	Drawing.	Object lessons.	Singing.	Gymnastics.	Manual training.	Book-keeping.	Total.
Western pay school	160	30	9	37	46	123	2	1,335
Eastern free school	194	34	15	42	58	129	4	1,518

	Hours per day.	Teachers, men.	Teachers, women.	Boys.	Girls.	Total.	Classes.
Western pay school	4 or 5	20	22	711	620	1,331	44
Eastern free school	5 or 4	21	23	917	763	1,680	54

In all these schools the sexes are separated. Special attention is paid in all Scandinavian schools to those gymnastic exercises which tend to develop the muscle and to render the body supple and agile of movement. In place of gymnastic exercises in summer, swimming is obligatory. In schools for girls lessons are given in cutting, fitting, in fact in needlework from the simplest methods through a course of progressive exercises (illustrated on the blackboard, point by point, by the teacher), up to the successful completion of underwear, hosiery, em-

broidery, etc. The classes of younger pupils commence by cutting paper of the proper dimensions, and finally in the last year of the course make garments according to specified instructions. Thus both theoretical and practical instruction is given during the seven years school period.

In the country districts the people's high schools for the benefit of farmers and farmers' sons have a plan of instruction which depends entirely upon the wishes of their patrons, and the capacity of the teachers, who are usually university graduates. Lectures are given on practical subjects appertaining to the science of agriculture, and on the history and institutions of the Kingdom.

In the burgher schools, which are similar in character to the German real schools, but are not of so high a grade as the Danish realskoler, the course of study comprises Danish, French, German, English, history, geography, arithmetic, geometry, natural history, penmanship, and drawing. In the secondary schools, so-called—that is, those which include the gymnasia and real schools—there is a continuation of the courses in the elementary grades. A more specific statement for such schools is as follows:

The middle or secondary schools of Denmark, which received their present form in 1850, have six-year courses. They are divided into gymnasia or classical schools, and Real schools, or those for practical life. The gymnasia (*lærde skoler*) have a division for languages and history (*sprolighistorisk*), and for mathematics and sciences (*matematisk-naturvidenskabelig*). In the four lower classes the courses are identical, except that in these classes the Real schools have no Greek, and the gymnasia no geometrical drawing or science. School attendance in these schools is from the twelfth to the eighteenth year. In the gymnasia French is obligatory for all six years; German only through the fourth class, although the student may continue it or take English instead in the upper classes. The Real schools have three modern languages obligatory. At the closing examination a French exercise is handed in, and the pupils are examined verbally in German or English. A decree of 1883 required the Real school students who wished to go to the polytechnic or the academy of forestry to pass an examination in three languages; other students only in English, with either German or French.

The courses of study in the normal schools of the Kingdom include religious instruction (dogma, moral precepts, sacred history, biblical antiquities, geography of the Holy Land), Danish language (grammar, style, history of literature), history of Denmark and universal history, geography of the world, arithmetic, algebra and geometry, stereometry, elements of astronomy and meteorology, natural history and physics, pedagogy, writing and reading, drawing, vocal and instrumental music (violin and organ), gymnastics. Manual training and modern languages do not enter into the course, but there is discussion in regard to supplying this lack. The director gives from sixteen to eighteen hours

of lessons a week; the professors have thirty hours instruction. The lessons continue daily during a six to seven hours' period.

The division of studies during the three years' period is as follows:

Number of hours each week.

Studies.	First year.	Second year.	Third year.
Religion.....	4	4	8
Danish.....	3	3	5
Arithmetic.....	3	2	2
Geometry.....	1	2	2
History.....	3	3	3
Geography.....	2	2	.....
Natural and physical sciences.....	6	6	.....
Writing.....	2	2	.....
Drawing.....	2	2	.....
Music.....	5	5	6
Gymnastics.....	3	3	3
Pedagogy.....	.....	.....	4
Total.....	34	34	33

For the professional training of teachers a school of application is attached to the normal proper. The students, above all those of the third year, practice in the school of application under general supervision of the professors, who preside at the lessons and aid the would-be teachers by their comments upon the methods pursued. During the week students of the other classes are invited in to observe and listen to the criticisms made. At the close of the first and second school years an examination takes place before the student can pass to the class above. The examination at the close of the school preparatory to the candidate's accepting a teacher's position, is before a commission of from nine to twelve educators, which meets in Copenhagen, Aarhus, or Odense. This method is, however, not considered eminently satisfactory, on account of the difficulty of proving the candidate's real efficiency, and there is probability of a change.

The University of Copenhagen in its course of study embraces law and political science, theology, medicine, philosophy, literature, and philology, mathematical sciences, etc. The methods of instruction in the university may be best understood by quoting from a letter of May 14, 1891, from the dean of the law faculty to the Minister of Public Instruction, which was forwarded in response to a request from this Office in regard to legal education. He states that—

The faculty of law and political science in the university at Copenhagen covers, in its course, all points of the laws of Denmark, Roman law, the philosophy of law (*Rets filosofi*), and laws of bankruptcy. The juridical faculty consists of five professors who are paid by the State from 3,200 to 6,000 crowns (\$857 to \$1,608), while the older professors are allowed 1,200 crowns (\$321) annually for house rent. The professors are not allowed to hold other public office during their incumbency of the professorship. The professor usually limits himself to instruction in one branch of law, and, as a general rule, gives one hour's lesson each week day from February 1 to June 9, and from the 1st of September to July there is a form of examination, and the professors take into consideration the books most needed in order to give a firm basis to the study of the kind of laws under consideration. At the close of the

year's instruction, when the term has expired, the professors examine those who have attended the course. A number of legal lights act as censors, or board of examiners, to take into consideration the results of such course of instruction. Those who have passed the maturity examination (*candidat juris*) and who are properly naturalized citizens have the right of admission to office, in which position their knowledge of law and of the rights of citizenship is available to them until they become full-fledged lawyers. Until that time they can make use of the intervening period for carrying out in practice what they have learned in theory.

According to a regulation of September 26, 1890, in relation to the legal examination for further advancement and of a subsequent one for the completed examination as lawyer (*fuldständige juridiske examen*), the requirements are less comprehensive in character. He who can practically demonstrate that he has sufficient legal knowledge to obtain the right of admission to a lower court of law will, in this manner, obtain by this new ruling the right of presentation.

The lectures, as well as the examinations, are held in the university building. Those who desire the right or title to be present at the lectures must show that they have obtained such right by the passing of a graduation examination, according to predetermined regulations, at either public or private schools, and in order to be permitted to attend the examination for entrance to the legal faculty they must also have passed an examination in philosophical branches in the university, as is required by the university regulations after a year of study. All of the lectures in the legal faculty of the university are gratuitous, and the students have free use of the university library; for registration in the university and for the different examinations there is no fee required.

The university also has a fund for the poor and industrious student. It is for the student himself to decide which course of lectures or studies he intends to pursue, and there is no special supervision of such studies, but by addressing himself to the professors he can obtain the requisite advice and guidance, and for the second year suggestions as to the plan of study. Most of the students employ a private tutor, from whom, as a rule, they obtain one hour's instruction a day. Five or six students join together in these lessons, and each one gives the tutor, or coach, about 12 crowns (\$3.21) each month.

Students generally enter the university from 17 to 18 years of age, and remain usually from 5 to 6 years, although in this period is reckoned the time employed in preparing for the philosophical examination. The number preparing for this can hardly be determined, but about 400, it is thought.

The grade of doctor of laws can be acquired by the *candidat juris* upon the presentation of a legal thesis on a subject chosen by the candidate, which, if satisfactory to the faculty, is published, and is publicly delivered and defended by the student desiring the honors. The degree is only conferred upon those who have thus shown themselves to be qualified, and it is conferred upon them by the faculty with the consent of the minister of public instruction and ecclesiastical affairs. The possession of the doctor's degree gives the right to hold public lectures in that special branch of the university faculty.

It may be stated here that there are various special institutions in which instruction is imparted in a special class of juridical study. For instance, land laws in the higher agricultural schools, laws appertaining to military affairs, maritime laws, the laws of nations [international law] in the military schools, etc.

An ordinance of June 25, 1875, accorded to women academic rights, with the privilege of obtaining any degree except that of theology. They have not the right, however, to receive university scholarships or pecuniary aid from the State. In attendance upon the courses in the university were several Danish ladies, the philosophical and medical courses being the most sought after by women. In 1890 there were

eleven women who passed creditable examinations, and one woman graduate received a gold medal for answering the historical prize questions, and has since been appointed assistant in the historical department of the Royal Archives. Others have taken up medical practice in Copenhagen.

The "Polytekniske Laereanstalt," or polytechnic school, has a complete course of instruction, the main branches pursued being mathematics, descriptive geometry, physics, chemistry, mineralogy, geognosy, science of agriculture, mechanics, surveying, machine construction, making of dykes, road-making, irrigation, mining, etc.

SCHOOL MANAGEMENT AND METHODS OF DISCIPLINE.

The school authorities of Denmark have laid down very few rules for the management of schools. Teachers are left quite free to develop the best methods to be employed, and, as a general rule, are permitted to follow out their own inclinations in their schools. The methods of teaching and the choice of text-books are generally left to the teacher, and equal freedom is allowed in the formation of programmes for the school, although it is understood that the course of studies designated by the teacher must be approved by the local school board, which, according to law, arranges the school programmes and selects the classical text-books. In the matter of study and recitation equal liberty of action is left to the teacher; in the country districts he is expected to have charge of at least 246 recitation hours a year, either in the one school to which he may be attached or in the ambulatory schools. Pupils receive marks for each recitation, 6 being the highest. At the close of each month the added marks show the standing of the pupil, and indicate his standing for the month to come. Monthly reports are given in the higher classes, however, and this daily marking system is discontinued.

Regulations are, however, rigorously enforced as to attendance of pupils; parents are fined if their children are absent, and may be fined even if it is only for a half-day absence, providing there is no satisfactory excuse for it. Children also may be punished for absence or other fault, by depriving them of recreation hours, or by four strokes of the ruler, the limit allowed by law. A class journal—for in some if not all schools such a journal is kept as a record of daily events—has a record of pupils punished with one stroke for having replied when not interrogated, and of four strokes for dipping paper in ink and throwing it on the floor.

Pupils are promoted from class to class in city schools by an annual examination in the presence of the communal school director—one or two of the pastors, some of the teachers, and the parents. In rural schools an examination is held at the close of six months in the presence of the local school board and the pastor.

SCHOOL ORGANIZATION.

In regard to the organization of schools, the Government early took action, for, according to the school law of 1814, it was decided that each district or parish should be provided with a sufficient number of suitable school buildings for all practical purposes. Owing to the impossibility of rapidly erecting such buildings as were required the schools were divided into two sections, according to the age and intellectual development of the children, one section for children knowing how to read and write, who frequented the schools from 8 to 1 o'clock, the other from 1 to 5 o'clock. A quarter of an hour was given to ventilation and to preparations for entering and leaving school. Each class was to have forty pupils. This arrangement had its defects, as the school desks suited to 15-year-old children would assuredly not do for 9-year-old children, but it permitted the people to encourage strict school attendance without causing any financial embarrassment to a country which had had its commerce ruined and its resources exhausted by war and territorial dismemberment.

The school groups commence with the schools for little folks, which are mixed schools of children from 7 to 9 and sometimes 10 years of age, who are given about four hours' instruction by women teachers, as a preparation for the second division of elementary grades. Coeducation is not common in schools above that age, the diversity of studies not permitting the two sexes to be instructed together. The public school, *almueskoler*, comprises the school for boys and that for girls and has as director an instructor, who is called an inspector. He really is the pedagogical director and administrator of the two schools, lodges in the building, and goes from one to the other for the control of lessons. He has, ordinarily, from 18 to 24 hours of class work each week. He usually controls about 20 male and as many female teachers, and his salary in city schools is about \$772. It is only since 1867 that women teachers have been allowed to teach in these schools, and it is only about twelve years since they have taken charge of classes of girls. A vice-inspectress, who has a lodging in addition to salary, has the general care of the building as far as order and discipline are concerned. She receives \$424 and has 36 hours of recitation each week. The schools are closed throughout Denmark on Saturday afternoon, and each day has its three recreations, two of ten minutes and one of twenty minutes.

The school hours in summer are from 8 to 11, in the morning, and from 1 to 4 in the afternoon; in winter from 9 to 12 in the morning and from 1 to 4 in the afternoon.

The school buildings are large and well ventilated. They are provided, as in Norway and Sweden, with furnaces, class rooms, halls for gymnastics, a director's study, where he can look over the work of the pupils. By law of March 8, 1856, the class rooms must be so constructed as to give 90 cubic feet of space for each child, and 2 meters 48 centi-

meters in height for each child. In Odense and other places there are special gardens set apart for women teachers. The schools of Odense, a city of 25,000 inhabitants, while they differ from the ordinary type, are worthy of description, as the school buildings, the school supply, etc., indicate what the Danes desire for their youth. The schools are divided into two distinct groups situated apart from each other. The boys' schools consist of three large isolated buildings upon the sides of an immense court planted with trees. At the entrance of the court is a pavilion occupied by the communal director or inspector. One of the buildings is frequented by elementary pupils from 9 or 10 to 14 years of age, each class having 36 pupils. One room is arranged for the teaching of the sciences, three lines of desks in a semicircle surrounding the master's desk, so that all the pupils can follow the experiments and demonstrations equally well. Around the room are glass cases with natural history collections, collections of plants and animals of the country, maritime products, skeletons, herbariums, minerals, etc.; instruments for physics, a chemical laboratory, globes, and geographic apparatus. The classes succeed each other in this room, the teacher always having near at hand whatever material may be needed for the instruction to be given. Each session of this school has 650 pupils.

Opposite is the infant school, where 250 little folks are distributed in groups of 24, or 30 at the most, under the charge of instructresses. The third building is a large gymnastic hall provided with suitable apparatus for Swedish exercises. Older pupils meet there on specified days for military exercises, fencing, and gymnastics. In another quarter the school for girls, organized in about the same manner, has a school for skilled handiwork attached to it. All the classes have instructresses directing them. On the lower floor is a room for recreation for stormy days. The furnace has electric apparatus connected with it, so that each teacher can regulate the heat for the classes; a bath and douche arrangements are noticeable, and the regulations are such that each day 120 young girls receive a five-minutes' douche, a bathwoman aiding them. A similar arrangement for boys is in preparation for the winter months. For nearly a century natation has been obligatory as a school exercise, and it takes the place of gymnastics in the summer time. Each school group has about 600 pupils in it.

The schools of Copenhagen are so organized that, except in the elementary classes, not more than 30 or 40 pupils are found in a class, and no school with one teacher is allowed to have more than 100 pupils. As soon as it is found that in crowded districts there are more than 100 pupils, a supplementary school or *Biskole* is established. The teacher of this school can employ, with consent of the authorities, a person who may be studying for a teacher's position, or he may employ an ambulatory teacher or *Omgangslærer*, who serves in three or four schools during the year. The free schools, *Friskoler*, in cities are organized similarly to the rural schools; the pay schools have usually a

higher grade of instruction and more regular attendance of pupils. In the free schools the pupils are only half-day pupils; in the pay school there are six to seven hours a day instruction in some schools and four to five hours in so-called half-day schools. The school fees in the pay schools amount to 24 cents a month in Copenhagen.

The furniture of the schools is limited to that which is most necessary. The desks are constructed for two persons, with seats having backs. The teacher occupies a slightly raised platform, with a blackboard in his rear. This board is divided into two parts, one plain for ordinary use, the other ruled, and used exclusively for drawing and geometrical problems. The abacus is used, however; there are natural history plates, anatomical, zoölogical, and botanical pictures and collections, Biblical pictures, apparatus for physics, etc. In the schools for girls there are sewing machines, gas stoves, ironing boards, and models (Schallenfled method) for instruction in manual training. This method, which not only gives technical skill but insists upon mental development, is applied from class to class, the pupils being given to understand what each step in advance signifies. In Copenhagen a normal course in the Schallenfled method of manual training has developed 58 instructresses for such teaching.

A decree of January 27, 1860, fixed 240 days as the minimum school term, although the length of the school term is generally left to the separate school boards.

SUPPLEMENTARY INSTITUTIONS.

Libraries and museums.—Students who desire to advance in special branches have the use of the library of the University of Copenhagen, which contains about 550,000 volumes and 30,000 manuscripts, and is particularly rich in Sanscrit and Singhalese collections. Copenhagen has also many museums: a royal museum of natural history, which is rich in zoological and mineralogical specimens; a museum of northern antiquities, which is unrivaled in its way; the Thorwaldsen Museum of Sculpture, and a royal gallery of paintings by the best masters.

Societies which aid educational progress.—There are also many societies, as Copenhagen is a noted center of literature, science, and art—among them a literary and scientific association, an academy of fine arts, and the royal society for northern antiquities. Among the societies which may be classed as educational is the society for domestic industry, which, founded in 1873, has as its object the employment of leisure hours in a useful and practical manner, and which is the parent of several local societies for that purpose and also schools for children and young people. By means of public expositions and prizes, by conferences, by the presentation of good models and descriptions of the same, and by the formation of a special corps of instructors it has been quite successful in its works. The society receives an annual subsidy

from the state. During the vacation periods, six weeks' courses are formed, under the patronage of the minister of public instruction, and these serve for the instruction of teachers of both sexes in various kinds of manual training, such as carpentering, brushmaking, bookbinding, straw work, sculpture, polishing, sewing, and cutting. The central school of this society is presided over by M. Clauson-Kaas, who was one of the founders of the society, and who is also in charge of a central institute for progress in manual training.

The "Dansk Sløjdforening," which issued its first report in 1886 and its fifth in 1890, presents models for "Sløjdskoler" or manual training schools according to the Aksel Mikkelsen system. Its laws indicate that its object is to engraft manual training on the schools from the highest to the lowest grade as a means of both hygienic and pedagogical development for the youth of the country. The association is to work with the teacher and the parent to see that models, plans, books, etc., are furnished for the purpose of progress in manual training. Membership in the association for life is accorded persons of both sexes who pay \$26.80, while \$1.07 covers the annual dues. The course in 1886, presided over by Aksel Mikkelsen, was followed by twelve men and six women, who were occupied from 7 to 11 o'clock with Sløjð instruction, from 1 to 2 o'clock lectures, 2 to 6 Sløjð, 6 to 7 o'clock drawing. The report for 1887 indicates that at least twenty schools had availed themselves of the society's material for Sløjð training. Several schools reported to the association as to the great value of the instruction given, among them private and public schools of both lower and higher grade. In the year 1888 there were 46 schools reporting Sløjð courses, which included lectures, skilled handiwork, drawing, etc. The number of pupils taking Sløjð courses by some one of the systems in vogue was 2,000 at that date. An increase to 59 schools in 1889 was observable. Included in the instruction given were sawing, cutting, planing, filing, tenon-sawing, chiseling, cornice planing, use of the gimlet and auger, mortise joining, etc. The report for 1890 of the "Dansk Sløjdforening" indicated that the efforts of the society to introduce Sløjð training in the schools was meeting with success, for the school budget contained an item of \$4,368 for the introduction of Sløjð in the schools, and the resolutions adopted by the members of the society in November, 1890, show the intention of the society to introduce this branch in the country schools. The Government also instituted a "Dansk Sløjdlærerskole" for the preparation of teachers of this branch.

The "Studentersamfundets Aftenundervisning for Arbejdere" was established in 1883, for the purpose of aiding the working classes to carry out any matured wishes for an advanced educational training. The limit of age was fixed at from 16 to 18 years, but this was afterwards changed, and the course, in 1888, included persons of 23 and 25 years of age. The studies pursued were writing (ordinary and fancy), grammar, arithmetic, bookkeeping, German, English, mathematics,

free-hand drawing, French, and gymnastics. The largest number of workmen attended the German, English, and arithmetic classes, while a few students had instruction in morals, physics, Danish literature, history, chemistry, geography, and natural history. The instruction was, however, not limited to these branches, for the programme included geology, science of laws, political economy, history of art, social economics, the Portuguese language, and gymnastics. The number of persons following these courses was as follows for the different years: 1,011 in 1886; 906 in 1887; 715 in 1888; 689 in 1889. The object of the society is, according to the statutes, to aid the working classes to obtain such knowledge as will fit for practical life. The membership is active, passive, honorary, and for life, the fees for life membership being \$13.40. Annual meetings of the members are held, the date of which meetings is published in the daily press. The income of the society in 1888-'89 was \$1,889. The expenditure was \$1,184, leaving \$705 on hand towards the next year's expenses.

Among those who availed themselves of this evening instruction were bookbinders, barbers, brushmakers, gardeners, lithographers, mechanics, coppersmiths, photographers, piano-workers, porters, zinc-workers, blacksmiths, telegraph operators, cashiers. In fact, nearly all trades were represented, and the advantage of the workings of such a society was evidently recognized by all classes.

The "Asylselskab," or society for the establishment of asylums, created the first asylum for children in 1835 in Copenhagen. Between that date and 1842 three others were created. All of these have been in charge of the society since that date and have not received any subsidy from the department of public instruction, because that department does not extend its jurisdiction to children under 7 years of age. These four asylums have sufficed for all children less than 7 years of age, until of late years other similar places where little folks can be cared for have been established in the suburbs of Copenhagen.

From December 1, 1835, until June, 1885, these infant asylums had taken care of 19,874 children. Each building is divided into several halls furnished with desks of six places or with long tables having seats with backs. Then there is a court or playroom furnished with benches, tables, and a harmonium or piano, also a court yard for recreation, a room for laying aside wraps, and a kitchen. The little ones have exercises in singing, skilled handiwork, such as knitting, folding cloth, weaving, then reading and writing for the larger children, singing psalms, a commencement of religious exercises, and object lessons. Lady members of the society come and give instruction. The directress, who occupies the first story of the building, has the general charge of the asylum. At Fredericia, the Dagmar asylum is under the patronage of the Empress of Russia, who gives annually \$115.80 towards its maintenance. A private society also has charge of this asylum, which receives from 120 to 150 children. The attendance is quite irregular,

varying from year to year. At Odense there are several asylums supported by the municipal authorities.

Education of the special classes.—Included under this head are the blind, deaf and dumb, idiots, and, in Copenhagen, the deformed. Institutions for these different classes are either national or subsidized, and are under the direction or control of the Minister of Public Instruction. The instruction given in such institutions limits itself generally to that of an elementary character with the elements of a professional education.

For the blind there is a large establishment at Copenhagen situated in the midst of extensive grounds, where all the blind of the country can easily be taken care of. For thirty years this institution has been under the charge of M. Moldenhawer, a distinguished specialist and educator. The age of the hundred or more children who are in his care, is from 8 to 18, and so agreeable are the arrangements made, that even with the deprivation of sight, all seem happy and joyous. The main effort of the teacher seems to be to prepare them to live according to normal methods and to care for themselves, instead of giving them special training in any one direction. The mode of life is that of a boarding school.

The instruction comprises religion, Danish language, arithmetic, writing, geography, history, natural history, physical sciences, geometry, drawing, singing, instrumental music, and manual training. The methods of teaching do not differ from those employed in ordinary schools, except in writing and reading. The punctured letters of Braille are used, but Roman letters are also employed so as to give the pupils better opportunities for carrying on ordinary correspondence with persons who are not blind. In the matter of music, those who show themselves especially apt pupils are developed as organists and piano tuners. A certain amount of instruction is given in both vocal and instrumental music. Special attention is given to gymnastics. Natation is substituted, however, in the summer, and a part of each day is given to manual training. In the first two years form and dimension are taught by means of cutting, modeling, etc. Each child, so far as is possible, is allowed to follow its natural bent. The boys generally incline to the making of brushes, weaving, straw plaiting, shoemaking, etc.; the girls learn to sew, knit, to weave, and to make brushes. Thus both sexes are being prepared to earn their own living after leaving the institution; and added to this skilled handiwork they have their musical studies, which often help to add to a regular salary obtained by other methods.

The deaf mutes are divided into two classes, those who are born deaf, and consequently have no knowledge of sound, and those who have become deaf, but are familiar with methods of speech. The former are sent to the Royal Institute at Fredericia, the others taught at the expense of the state or communal authorities in the Keller institutions

in Copenhagen. Still others who are capable of being instructed by the sign method are placed in a third State institution. The institution at Fredericia was opened on August 1, 1881, and its construction was according to the most modern methods, the arrangements, both hygienically and pedagogically considered, being most admirable. It is surrounded by large wooded grounds, and is situated high above the sea, overlooking Fionie, Jutland, etc. Like the institution of the blind, it is opened to both sexes, and with its annex, which contains four classes, it instructs 240 pupils of from 8 to 16 years of age. The instruction is purely oral; that is, according to the articulation method, the pupils and teachers converse with each other, read aloud, etc. Annually, in the month of August, pupils are brought before the minister of public instruction for examination, the result of which is to class them for the year to come. The life here is that of a day school; but certain pupils who have had no advantages are placed among those of 6 to 8 years, and for two years they remain with the institution; after that all are treated as day pupils and are placed, two, three, and four at a time, in families in the town, where they are treated like members of the household. These day pupils live the life of those who have a normal development, and endeavor to habituate themselves to all ordinary avocations of the people around them. At 8 A. M. they reach the institute and stay till 11; they then go to their homes, attending to errands, shopping, and the like for their adopted parents while en route; at 1 o'clock they are back again at school, where they remain till 4. The expenditures per pupil are about \$53 for eleven months of the year. The budget of the institution is about \$18,335. The course of study includes religion, Danish language, reading, writing, arithmetic, natural history, which includes geography and a general knowledge of the earth's surface, national history, gymnastics, and manual training. The instruction in these different branches is entirely according to the articulation method. This tends greatly towards the intellectual development of the children, and toward fitting them for mingling with others after graduation from the institution. The instruction in manual training has no professional aim, but consists simply in papier-mâché work, wood carving, sculpture, working in the gardens, cutting, knitting, etc. Methods of instruction employed in other institutions for deaf mutes are not presented; they doubtless do not differ greatly from the plan at Fredericia.

The education of idiots is undertaken in institutions which were established in Copenhagen in 1865 by Prof. I. Keller as philanthropic institutions, and which have since received subsidies from the state, which also grants many scholarships. The brothers Keller carry on a number of asylums, hospitals, and educational institutions, which received in 1887 about 170 deaf mutes and 459 idiots, who were either imbecile or epileptic. The idiots are classified in two sections, one for those who are susceptible of being educated, and the other for those whose capacity for education is undergoing test. The number of per-

sons in these two sections is 231; of these 154 are boarders and 77 day pupils. The 231 are distributed in five boarding establishments superintended by seven plejemödre, or matrons, who are under the superintendence of an administrator, Dr. Chr. Keller, and a pedagogical director. The pupils are distributed in different classes; those capable are supposed to acquire the most indispensable branches, and to familiarize themselves with various matters appertaining to housekeeping, and with certain industrial employments which may be of aid to them in the future. The Keller enterprise has three distinct divisions: the school of preparation, or it might be called of examination, which aims to find out what the children are capable of; the school of practice, and the school of theory. The preparatory classes often receive pupils who remain several years in them, all the exercises tending to develop the senses, to reform the mode of speech, to train the pupils so as to develop habits of civilization, and to give them an idea of the more ordinary acts of life, and of the simplest interests in life's pathway. If there is no latent germ to be developed then the pupil is sent among the incurables; if otherwise, he enters the schools of practice or theory. In this earliest stage of effort to instruct, lessons are given in articulation, in language, in form, color, numbers, sounds, object lessons, exercises preparatory to writing and reading, manual training and domestic instruction, gymnastic movements, singing, and games, the whole instruction extending over 36 hours a week of 45 minutes each. The lessons of activity, so called, are to show the child how to care for his person, to serve himself at meals, to carry water, to brush, to lay the cloth and dishes on the table, to fill a bottle with water, and divers other similar acts which will or may serve to show how capable he is of learning ordinary things.

Those who pass into the practice school are divided into two groups, viz, those who are susceptible of intellectual and moral development, and those who can learn how to conduct themselves in the ordinary avocations of life and possibly become useful in some occupation. To follow out such method, the school of practice is divided into two sections, the study class with its elementary, secondary, and superior courses, and the work class.

The study class is instructed in the following branches, the figures showing the number of lessons a week.

Subjects.	Higher course.	Intermediate course.	Elementary course.
Danish language	4	5	6
Religious instruction	4	3	2
Object lessons	2	3	2
Explanation of articles	2	2	2
Arithmetic	3	3	2
Writing	2	2	2
Dictation, exercises	2	2	0
Exercises in activity	0	0	2
Singing	2	2	2
Manual training, domestic employment, gymnastics	12	12	12
Total	33	34	32

The working classes omit reading, writing, arithmetic, but include object lessons, singing, language exercises, lessons as to the taking care of themselves, domestic employment, etc. The pupils who in the preparatory division have shown themselves intelligent enough to receive an ordinary education are passed into the theoretical classes, where the instructors watch over them with the greatest care and teach them in the simplest manner, such lessons as bear upon reading, writing, arithmetic, drawing, religion, history, geography, natural and industrial products, the idea being to develop the pupil intellectually and morally, while incidentally imparting a certain degree of positive knowledge. The guiding principle is to teach the child only what is within his capacity.

The division of studies is as follows:

Subject.	First course.	Second course.	Third course.	Fourth course.
Danish language.....	3	5	4	6
Religious instruction.....	3	3	3	2
Object lessons.....	2	2	2	3
Geography, history.....	3	2	0	0
Explanations of images.....	0	2	2	2
Arithmetic.....	2	4	4	3
Writing.....	2	2	2	0
Drawing.....	4	2	2	2
Exercises.....	2	2	2	0
Singing.....	2	2	2	2
Gymnastics, manual training, wood carving, etc.....	12	12	12	12
Total.....	35	38	35	32

The pupils also occupy themselves daily with work in weaving, carpenter work, and brush making; the girls have mending, cutting, knitting, and domestic work. This methodical plan of instruction is such that the institutions have for twenty years merited the confidence of the State and of different families, and such that two-thirds of the persons confided to the brothers Keller have been reclaimed from a life of imbecility.

Another school, that for maimed or deformed children, was established 25 years ago in Copenhagen, and has given instruction and the means of existence to 2,054 children since that date. A private society has charge of this school, but its president is M. Koefoed, secretary to the King's private council. The aim of this society is to take charge of children who are deformed or maimed and to care for them in the best possible manner; they are furnished bandages, splints, crutches, artificial limbs, etc., and to the age of 18 years are given an elementary education, and are placed in the way to care for themselves after that age. At first admission was restricted to residents of Copenhagen, but later the maimed from all parts of Denmark were admitted. In order to examine as to the admission of persons suffering from disease, injury, etc., four physicians form a special clinic which is open

daily for the gratuitous examination as to the bodily infirmities of children brought before it. The plan of the society is not to give instruction to such children, but to place them in private institutions, among children of a normal growth, the expenditures for such instruction being defrayed by the city of Copenhagen from the budget for elementary instruction. In a professional school the girls, deprived perhaps of an arm or hand, are taught to sew, mend, embroider, crochet, and knit; the boys make rugs, mattresses, shoes, woven slippers, children's toys, brushes, and baskets. A few draw, engrave, paint upon porcelain, do watchmaking, and in other ways prepare themselves to earn a livelihood. Some of the girls obtain positions as cashiers. Twice a day women from outside come in and give instructive and amusing lectures which are listened to attentively by the unfortunates. This professional school is subsidized by the ministry of public instruction, and is reported to have been of great help to the class of children who were unfortunately deformed from birth or were suffering from injury received at an early period of their existence.

SUMMARIZATION AND FUTURE POSSIBILITIES.

A general survey of the school system of Denmark clearly shows that the people of that kingdom are cognizant of the best methods of thoroughly training both body and mind, for they do not limit themselves to the theoretical, but take a foremost rank on the practical side of a rational education. Of late years they have studied the subject of coeducation, as well as the more thorough education of women for teachers' positions, but as yet little progress has been made in these particulars. As in Sweden and Norway the subject of school reform in the various grades is under discussion, and a writer in the pedagogical journal, *Vor Ungdom*, earnestly urges a revision of the elementary school plan, so as to have the children attend regularly all day schools in rural districts, rather than the half-day or every-other-day schools now found in many places. Coeducation is also advocated, as is also the introduction of drawing, physics, mathematics, and English in three class elementary schools which are to take the place of the two class schools now found in rural districts; an important part of his plan is, however, not the development of intellectual instruction in elementary schools, but the addition of a higher and more practical division to this proposed elementary school. He would have the children enter this higher division at 14 years of age, and there follow a two-years' curriculum. The practical instruction would consist of farming and the tending of domestic animals, a farm with a model garden and beehives being attached to each school, so that all children should receive instruction in gardening and in bee culture. Natural history is to be taught in the lower division of the school by means of plants and insects of the adjoining fields. The writer's idea is that interest in hor-

ticulture, a taste for orderly homes, and a development of the artistic sense will be the natural result of this plan, nor would he neglect practical instruction in Slöjd or other domestic industries, for he would have the children taught to make rakes, wheelbarrows, benches, stools, portable steps, hencoops, and beehives, and the use of various tools, etc. He also urges the need of more instruction in domestic industries in rural schools rather than so much teaching of pedagogical Slöjd. This he advocates from an economic standpoint. Bookkeeping is another subject to be introduced, and the school farm is also to be a model farm.

For some time the tendency in the Scandinavian countries has been to increase and extend the intellectual subjects in elementary grades, and to model those grades on the secondary schools, without taking into consideration the various positions which the children will occupy in after life, consequently the writer hopes that these suggestions come at an apropos time.

At the present time the association of private secondary teachers in Copenhagen is engaged in facilitating the passing of private teachers from private into public schools. This association considers that many of the best teachers begin their school career in private schools in Copenhagen, where the salary on which they start is higher, and where more private lessons out of school are to be obtained than in the small provincial towns, where most of the public governmental state schools are located. The association has forwarded an address to the Government and the Rigsdag, proposing that teachers of ten years' service at private schools on obtaining a teachership at governmental schools shall at once be entitled to the same privileges and to the same salary as public school teachers after four years' service.

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CHAPTER XVI.

EDUCATION IN EUROPE AND AMERICA.¹

Showing (a) what portion of the population is enrolled in school; (b) the expenditures per capita for elementary instruction; (c) whether elementary instruction is gratuitous or not.

INTRODUCTION.

The accompanying charts and diagrams are a continuation of a systematic comparison, commenced in the Annual Report of 1888-89, Part I, pages 75-78, showing the sum total of educational efforts in Europe and Pan-America between kindergarten and university.

Various lines of inquiry were pointed out last year as standards of comparison, but for reasons then stated only one was applied, *i. e.*, "What portion of the population of each nation in Europe and America is under school influence?" This year the inquiry is extended to two other questions, *i. e.*, "What is the cost of elementary instruction per capita of the population?" and "Is elementary instruction gratuitous, or is a tuition fee charged?" It will be seen that while most of the blanks which appeared in last year's tables are filled this year, new blanks occur in the new columns. It is to be hoped that they will disappear as quickly as those of last year.

While the diagrams illustrating the tables last year, by representing the population of each country by means of a square, were welcomed by those who evinced an interest in comparative statistics, it is confidently hoped that the new diagrams, in which the bar is employed, will be considered an improvement. This mode of presentation requires the eye to measure only one dimension (length), and hence will be preferable to the square, which necessitates the eye to measure both length and breadth.

The diagrams are duplicated, No. I showing a bar of 100 per cent, representing the entire population, within which bar the ratio of children enrolled in school is shaded; while in No. II a bar of only 30 per cent is given, representing the ideal ratio of youth of school age (or very nearly so) and the portion of those actually enrolled, thereby revealing the two facts, *i. e.*, the number of youth who are under school influence as well as the number of those who ought to be.

¹ Prepared by L. R. KLEMM, specialist in foreign school systems.

In the result of this inquiry we have systematically excluded from the count all institutions such as "infant schools" and "kindergartens," because they represent the preschoolastic age. Also excluded are all professional schools, such as universities, polytechnical, medical, pharmaceutical, and art schools, conservatories of music, in fact, all special schools except normal schools, not because the latter are not special and professional schools, for they are, and needs must be, but because they are not sufficiently designated as special schools in the statistical material at hand.

This then brings the age, commonly called "school age," within the years 6 and 18 (or 20). These limits are not in all cases and in all nations the same, which may account for a small percentage of difference in the number of enrolled children. Again, the sum total stated for Great Britain and Ireland does not contain the number of secondary students, while they are included in nearly all other countries. Secondary instruction being entirely left to private enterprise in England, it is not possible to obtain reliable statistics concerning it. It would be but just to add from $1\frac{1}{2}$ to 2 per cent to the ratio given in order to place Great Britain and Ireland on a similar basis with European continental countries. But aside from little unavoidable discrepancies and possible errors, these tables and diagrams reveal facts which invite the most earnest attention.

With regard to the new columns: (a) Cost per capita, and (b) Tuition fee paid or not? it is regretted that the officials of some countries do not report the amount of expenditures by provincial and local authorities, and only state the amount paid by the central governments. These items were inserted rather than leave blanks. But they are marked thus (*), which means from state only.

The tables are printed in triplicate by arranging the countries (a) according to the alphabet; (b) according to the population; (c) according to the ratio. This is done to facilitate comparison. This Bureau will be grateful if errors of omission or commission are pointed out in the accompanying tables, and enlists the aid of all who are interested in comparative statistics of this kind in completing and perfecting the tables.

TABLE I.—*Education in Europe between Kindergarten and University, 1890.*

ALPHABETICALLY ARRANGED.

Countries.	Date of census or estimate.	Population.	Date of report.	Children enrolled in school.	Ratio to population.	Cost of elementary instruction per capita of population	Pay tuition or not.
					<i>Per ct.</i>		
Austria-Hungary	1890	41,231,342	1889	5,312,656	12.9		
Austria	1890	23,895,413	1889	3,132,088	13.1	*\$0.22	Pay and free schools.
Hungary	1890	17,335,929	1889	2,180,568	12.6	.42	Do.
Belgium	1890	6,147,041	1890	827,958	13.5	1.60	Do.
Bulgaria (and Roumelia)	1890	3,154,375	1890	171,983	5.5	*.12	Free.
Denmark	1890	2,185,159	1885	239,940	11.0	1.54	Pay and free schools.
France	1891	38,343,192	1889	5,807,157	15.1	1.34	Free.
Germany	1890	49,421,064	<i>a</i> 1890	9,300,000	18.8		
Prussia	1890	29,959,388	<i>a</i> 1890	5,874,390	19.6	1.86	Pay and free schools.
Bavaria	1890	5,589,382	1890	1,187,792	21.2		Do.
Saxony	1890	3,500,513	1889	706,946	20.2	2.28	Free.
Württemberg	1890	2,035,443	1889	388,262	19.0	1.67	Pay and free schools. ^b
Baden	1890	1,656,817	1889	342,764	20.6		Do.
Hamburg	1890	622,530	1889	96,356	15.6		Free.
Bremen	1890	180,443	1890	32,191	18.0	1.94	Do.
Lübeck	1890	76,485	1890	14,403	18.7	2.17	Do.
Great Britain and Ireland	1891	37,888,153	1890	6,181,858	16.3		
England and Wales	1891	29,001,018	1890	4,825,560	16.6	1.39	Pay and free.
Scotland	1891	4,033,102	1890	664,466	16.4	1.40	Free.
Ireland	1891	4,706,162	1890	694,892	14.7	1.05	Pay and free. ^c
Greece	1889	2,187,208	1881	140,155	6.4		
Italy	1890	30,158,408	1889	2,733,859	9.6	.79	Pay and free schools.
Montenegro	<i>a</i> 1890	236,000	1889	3,300	1.4		Free.
Netherlands (The)	1890	4,564,565	1890	657,611	14.2	1.42	Pay and free schools. ^b
Norway	1891	1,999,176	1888	308,507	15.4	.80	Do.
Portugal	1881	4,708,178	1887	276,688	5.9	*.25	Do.
Roumania	<i>a</i> 1887	5,500,000	1890	138,800	2.5	*.20	Free.
Russia	1889	95,870,810	1890	<i>a</i> 3,000,000	3.1	*.13	Pay and free schools.
Finland	1889	2,305,916	1890	406,966	17.6	*.50	Do.
Servia	1891	2,162,759	1889	58,575	2.7	*.23	Free.
Spain	1887	17,550,246	1885	1,859,183	10.6	*.21	Pay and free schools.
Sweden	1890	4,784,675	1890	736,790	15.4	.70	Do.
Switzerland	1888	2,917,740	1890	570,935	19.5	2.03	Free.
Turkey	<i>a</i> 1885	4,786,545	1882	126,471	2.6		Small fee.

* From State only.

a Estimated.*b* Amount of tuition paid in Württemberg, \$1 to \$1.50 per annum. Amount of tuition paid in the Netherlands varies between \$3, \$8, and \$24 per annum.*c* The bill for the remission of fees in Ireland was not passed till 1892. In England and Wales the corresponding bill did not go into effect until September, 1891.

TABLE II.—*Education in Europe between Kindergarten and University, 1880.*

ARRANGED ACCORDING TO POPULATION.

Countries.	Date of census or estimate.	Population.	Date of report.	Children enrolled in school.	Ratio to population.	Cost of elementary instruction per capita of population.	Pay tuition or not.
Russia	1889	95,870,810	1890	α3,000,000	3.1	\$.0.13	Pay and free schools.
Germany (Empire)	1890	49,421,064	1890	9,300,000	18.8	.....	.....
Austria-Hungary	1890	41,231,342	1883	5,312,656	12.9	.....	.....
France	1891	38,343,192	1889	5,807,157	15.1	1.34	Pay and free.
Great Britain and Ireland ..	1891	37,888,133	1890	6,184,858	16.3	.....	.....
Italy	1890	30,158,408	1889	2,733,859	9.6	.79	Pay and free schools.
Prussia	1890	29,959,388	α1890	5,874,390	19.6	1.86	Do.
England and Wales	1891	29,001,018	1890	4,825,530	16.6	1.30	Pay and free.
Austria	1890	23,895,413	1889	3,132,088	13.1	*.22	Pay and free schools.
Spain	1887	17,550,246	1885	1,859,183	10.6	*.21	Do.
Hungary	1890	17,335,929	1889	2,189,563	12.6	.42	Do.
Belgium	1890	6,147,041	1890	827,958	13.5	1.60	Do.
Bavaria	1890	5,589,382	1890	1,187,792	21.2	.....	Do.
Roumania	α1887	5,500,000	1890	138,800	2.5	*.20	Do.
Turkey	α1885	4,786,545	1882	126,471	2.6	.....	Small fee.
Sweden	1890	4,784,675	1890	739,790	15.4	.70	Pay and free schools.
Portugal	1881	4,708,178	1887	257,688	5.9	*.25	Do.
Ireland	1891	4,706,162	1890	694,832	14.7	1.65	Pay and free. <i>b</i>
Netherlands, the	1890	4,564,565	1890	637,611	14.2	1.42	Pay and free schools.
Scotland	1891	4,033,103	1890	664,466	16.4	1.40	Free.
Saxony	1890	3,500,513	1889	709,946	20.2	2.28	Do.
Bulgaria (and Roumelia) ..	1890	3,154,375	1890	171,983	5.5	*.12	Do.
Switzerland	1888	2,917,740	1890	570,935	19.5	2.63	Do.
Finland	1889	2,305,916	1890	406,956	17.6	*.50	Pay and free schools.
Greece	1889	2,187,208	1884	140,155	6.4	.....	.....
Denmark	1890	2,185,159	1885	239,940	11.0	1.54	Do.
Serbia	1891	2,162,759	1889	58,575	2.7	*.23	Free.
Württemberg	1890	2,035,443	1889	388,262	19.0	1.67	Pay and free schools.
Norway	1891	1,993,176	1888	308,507	15.4	.89	Do.
Baden	1890	1,656,817	1889	342,764	20.6	.....	Do.
Hamburg	1890	622,530	1889	96,356	15.6	.....	Free.
Montenegro	1890	236,000	1889	5,300	1.4	.....	Do.
Bremen	1890	180,443	1890	32,191	18.0	1.94	Do.
Lübeck	1890	76,485	1890	14,403	18.7	2.17	Do.

* From State only.

b See footnote c on p. 551.

α Estimated.

TABLE III.—*Education in Europe between Kindergarten and University, 1890.*

ARRANGED ACCORDING TO RATIO OF CHILDREN IN SCHOOL.

Countries.	Date of census or estimate.	Population.	Date of report.	Children enrolled in school.	Ratio to population.	Cost of elementary instruction per capita of population.	Pay tuition or not.
Bavaria	1830	5,589,382	1890	1,187,792	21.2	.....	Pay and free schools.
Baden	1890	1,656,817	1889	342,764	20.6	.....	Do.
Saxony	1890	3,500,513	1889	706,046	20.2	\$2.28	Free.
Prussia	1890	29,959,388	a 1890	5,873,390	19.6	1.86	Pay and free schools.
Switzerland	1888	2,917,740	1890	570,935	19.5	2.03	Free.
Württemberg	1890	2,035,443	1889	388,262	19.0	1.67	Pay and free schools.
Germany (Empire)	1890	49,421,064	a 1890	9,300,000	18.8	.....	Free.
Lübeck	1890	76,485	1890	14,403	18.7	2.17	Do.
Bremen	1890	180,443	1890	32,191	18.0	1.94	Do.
Finland	1889	2,305,916	1890	406,966	17.6	*.50	Pay and free schools.
England and Wales	1891	29,001,018	1890	4,825,560	16.6	1.30	Pay and free.
Scotland	1891	4,033,103	1890	664,466	16.4	1.40	Free.
Great Britain and Ireland..	1891	37,888,153	1890	6,184,858	16.3	.....	Pay and free.
Hamburg	1890	622,530	1889	96,356	15.6	.....	Free.
Norway	1891	1,199,176	1888	308,597	15.4	.80	Pay and free schools.
Sweden	1890	4,784,675	1890	736,790	15.4	.70	Do.
France	1891	38,343,192	1889	5,807,157	15.1	1.34	Free.
Ireland	1891	4,706,162	1890	694,832	14.7	1.05	Do.
Netherlands, the	1890	4,564,565	1890	657,611	14.2	1.42	Pay and free schools.
Belgium	1890	6,147,041	1890	827,958	* 13.5	1.60	Do.
Austria	1890	23,895,413	1889	3,132,088	13.1	*.22	Do.
Austria-Hungary	1890	41,231,342	1889	5,312,656	12.9	.....	Do.
Hungary	1890	17,335,929	1889	2,180,568	12.6	.42	Do.
Denmark	1890	2,185,159	1885	239,940	11.0	1.54	Do.
Spain	1887	17,550,246	1885	1,859,183	10.6	*.21	Do.
Italy	1890	30,158,408	1889	2,733,859	9.6	.79	Do.
Greece	1889	2,187,208	1884	140,155	6.4	.....	Do.
Portugal	1881	4,708,178	1887	276,688	5.9	*.25	Pay and free schools.
Bulgaria	1890	3,154,375	1890	171,983	5.5	*.12	Free.
Russia	1889	95,870,810	1890	a 3,000,000	3.1	*.13	Pay and free schools.
Servia	1891	2,162,759	1889	58,575	2.7	*.23	Free.
Turkey	a 1885	4,786,545	1882	126,471	2.6	.....	Small fee.
Roumania	a 1887	5,500,000	1890	138,800	2.5	*.20	Free.
Montenegro	a 1890	236,000	1889	3,300	1.4	.....	Do.

* From State only.

a Estimated.

DIAGRAM I. Education in Europe, 1890. Ratio to population under school influence.

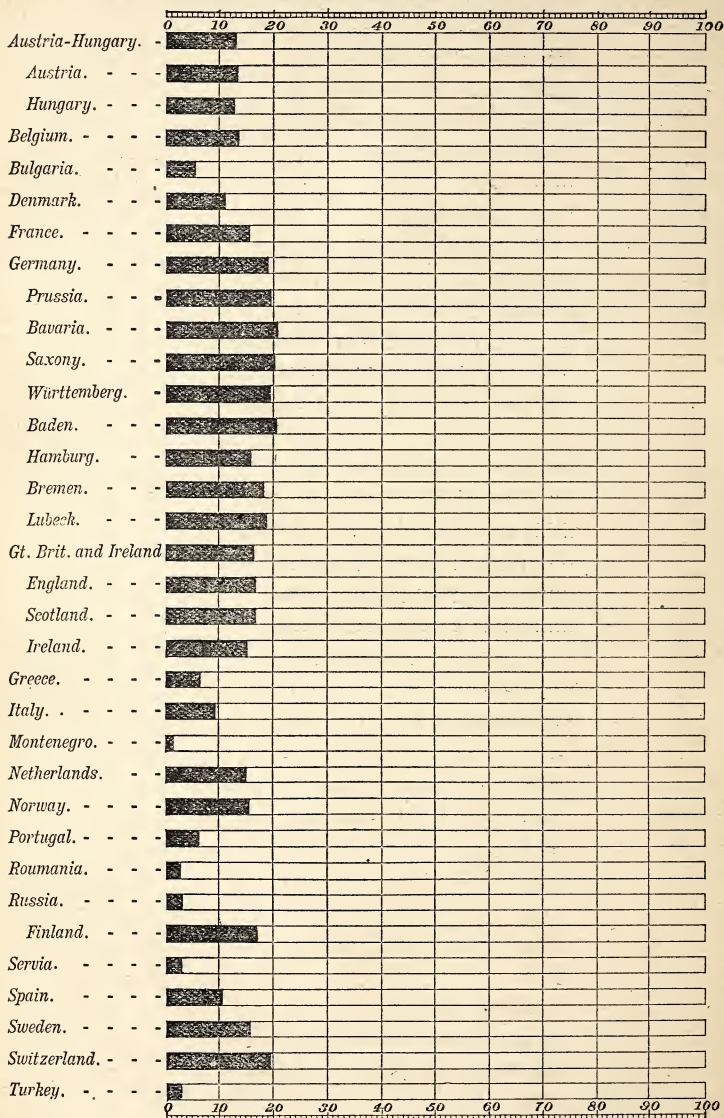


DIAGRAM II. Education in Europe, 1890. Ratio to population under school influence.

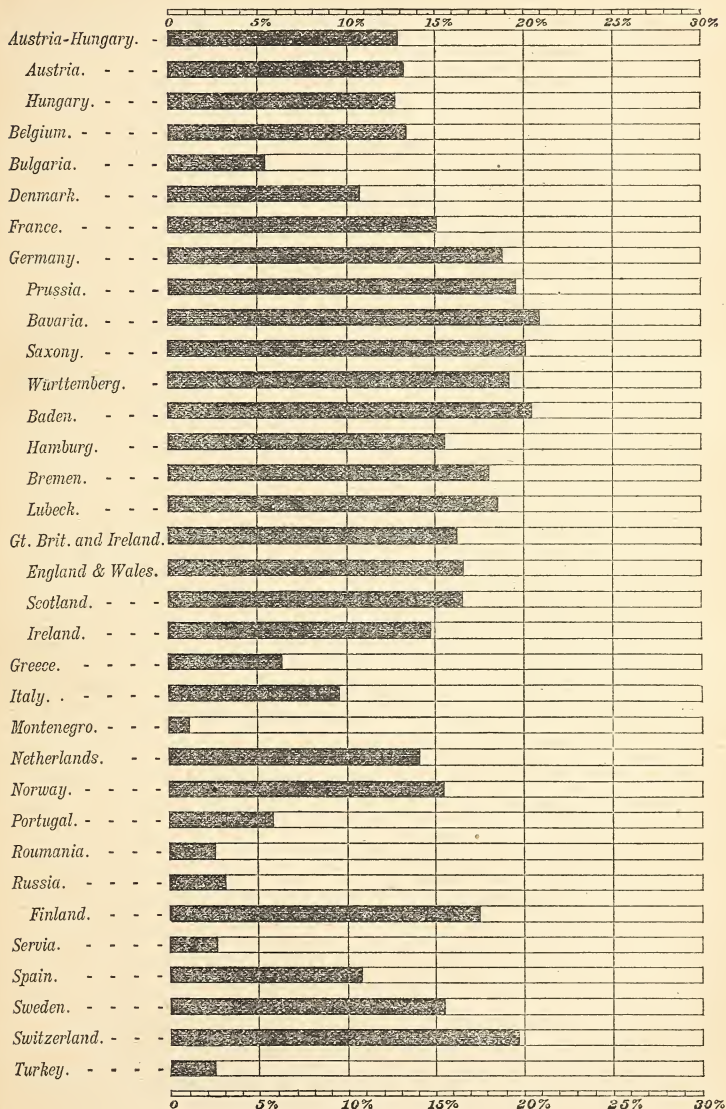


TABLE IV.—*Education in America between Kindergarten and University, 1890.*

ALPHABETICALLY ARRANGED.

Countries.	Date of census or estimate.	Population.	Date of report.	Children enrolled in school.	Ratio to population.	Cost of elementary instruction per capita of population.	Pay tuition or not.
Argentina Republic	1887	4,086,492	1890	276,983	<i>Per ct.</i> 6.8	<i>a</i> \$2.55	Free.
Bolivia	1888	1,192,162	1890	27,764	2.3	°.03	Do.
Brazil	1888	14,002,335	1889	305,193	2.2	1.51	Do.
Canada	1891	4,829,411	1889	998,823	20.8	1.85	Do.
Chile	1891	2,766,747	1888	122,664	4.4	(?)	Do.
Colombia	1881	3,878,606	1889	93,187	2.4	(?)	Do.
Costa Rica	1891	238,782	1890	17,600	7.3	1.55	Do.
Cuba	1890	1,521,684	1887	650,000	3.3	(?)	Do.
Ecuador	1890	1,271,861	1890	58,308	4.6	(?)	Do.
Guatemala	1890	1,452,003	1890	57,380	4.0	.37	Do.
Guiana (British)	1891	284,887	1890	27,884	9.8	.44	Pay and free schools.
Guiana (French)	1890	25,796	1888	1,658	6.4	(?)	Free.
Haiti	1887	960,000	1890	610,000	1.0	(?)	Free.
Honduras	1889	431,917	1890	623,000	5.3	(?)	Free.
Honduras (British)	1891	31,471	1890	2,450	8.0	°.32	Pay and free schools.
Jamaica	1891	639,491	1890	75,680	11.8	°.21	Do.
Martinique and Guadelupe ..	1888	324,462	1888	18,073	5.5	(?)	Free.
Mexico	1889	11,632,924	1888	543,977	4.7	.32	Free.
Nicaragua	1890	400,000	1887	11,914	3.0	(?)	Do.
Paraguay	1887	329,645	1891	25,594	8.0	.99	Do.
Peru	1886	2,700,945	1890	71,435	2.6	.11	Pay and free schools.
Puerto Rico	1890	896,708	1889	28,473	3.7	(?)	Free.
Salvador	1891	777,895	1889	610,000	1.6	(?)	Free.
Santo Domingo	1888	610,000	1890	610,000	1.6	(?)	Free.
Surinam	1889	55,968	1889	5,684	10.0	(?)	Pay and free schools.
Trinidad	1890	208,030	1890	19,685	9.4	.70	Do.
United States	1890	62,622,250	1890	14,377,536	23.3	2.24	Free.
North Atlantic Division	1890	17,410,545	1890	3,694,067	21.2	2.76	Do.
South Atlantic Division	1890	8,857,920	1890	1,903,468	21.5	.96	Do.
North Central Division	1890	22,362,279	1890	5,647,308	25.0	2.81	Do.
South Central Division	1890	10,972,893	1890	2,558,378	23.3	.98	Do.
Western Division	1890	3,027,613	1890	574,315	19.0	3.34	Do.
Uruguay	1889	683,943	1888	54,513	8.0	.75	Pay and free schools.
Venezuela	1890	2,285,054	1891	104,840	5.0	°.16	Free.

* From State only.

b Estimated.

a Depreciated paper money.

TABLE V.—*Education in America between Kindergarten and University, 1890.*

ARRANGED ACCORDING TO POPULATION.

Countries.	Date of census or estimate.	Population.	Date of report.	Children enrolled in school.	Ratio to population.	Cost of elementary instruction per capita of population.	Pay tuition or not.
United States (entire).....	1890	62,622,250	1890	14,377,536	23.3	\$2.24	Free.
North Central States (United States.)	1890	22,362,279	1890	5,617,308	25.0	2.81	Do.
North Atlantic States (United States.)	1890	17,410,545	1890	3,694,067	21.2	2.76	Do.
Brazil.....	1888	14,002,235	1889	305,193	2.2	.51	Do.
Mexico.....	1889	11,632,924	1888	543,977	4.7	.32	Do.
South Central States (United States.)	1890	10,972,893	1890	2,558,378	23.3	.98	Do.
South Atlantic States (United States.)	1890	8,857,520	1890	1,903,468	21.5	.96	Do.
Canada.....	1891	4,829,411	1889	998,823	20.8	1.85	Do.
Argentine Republic.....	1887	4,086,492	1890	276,983	6.8	<i>a</i> 2.55	Do.
Colombia.....	1881	3,878,600	1889	93,187	2.4	.....	Do.
Western States (United States.)	1890	3,027,613	1890	574,315	19.0	3.34	Do.
Chile.....	1891	2,766,747	1888	122,664	4.4	.....	Do.
Peru.....	1886	2,709,945	1890	71,435	2.6	.11	Pay and free schools.
Venezuela.....	1890	2,285,054	1891	104,840	5.0	.16	Free.
Cuba.....	1890	1,521,684	1887	<i>b</i> 50,000	3.3	.....	Do.
Guatemala.....	<i>b</i> 1890	1,452,003	1890	57,380	4.0	.37	Free.
Ecuador.....	<i>b</i> 1890	1,271,861	1890	58,308	4.6	.....	Do.
Bolivia.....	1888	1,192,162	1890	27,764	2.3	*.03	Do.
Haiti.....	1887	960,000	1890	<i>b</i> 10,000	1.0	.....	Do.
Puerto Rico.....	1890	806,708	.....	.....	.....	.....	.....
Salvador.....	1891	777,895	1889	28,473	3.7	.....	.....
Uruguay.....	1889	683,943	1888	54,513	8.0	.75	Pay and free schools.
Jamaica.....	<i>b</i> 1891	639,491	1890	75,683	11.8	.21	Do.
Santo Domingo.....	1888	610,000	1890	<i>b</i> 10,000	1.6	.....	Do.
Honduras.....	1889	431,917	1890	<i>b</i> 23,000	5.3	.....	Do.
Nicaragua.....	<i>b</i> 1890	400,000	1887	11,914	3.0	.....	Do.
Paraguay.....	1887	329,645	1891	25,594	8.0	.96	Do.
Martinique and Guadeloupe.	1888	324,462	1888	18,073	5.5	.....	.....
Guiana (British).....	1891	284,887	1890	27,884	9.8	.44	Pay and free schools.
Costa Rica.....	1891	238,782	1890	17,500	7.3	1.55	Free.
Trinidad.....	1890	208,030	1890	19,685	9.4	.75	Pay and free schools.
Surinam.....	1889	55,968	1889	5,684	10.0	.....	Do.
Honduras (British).....	1891	31,471	1890	2,450	8.0	* 0.32	Do.
Guiana (French).....	<i>b</i> 1890	25,796	1888	1,653	6.4	.....	.....

* From State only.

a Depreciated paper money.*b* Estimated.

TABLE VI.—*Education in America between Kindergarten and University, 1890.*

ARRANGED ACCORDING TO RATIO OF CHILDREN IN SCHOOL.

Countries.	Date of census or estimate.	Population.	Date of report.	Children enrolled in school.	Ratio to population.	Cost of elementary instruction per capita of population.	Pay tuition or not.
North Central States (United States)	1890	22,362,279	1890	5,647,308	25.0	\$2.81	Free.
United States (entire)	1890	62,622,250	1890	14,377,536	23.3	2.24	Do.
South Central States (United States)	1890	10,972,893	1890	2,558,378	23.3	.98	Do.
South Atlantic States (United States)	1890	8,857,920	1890	1,903,468	21.5	.96	Do.
North Atlantic States (United States)	1890	17,410,545	1890	3,694,067	21.2	2.76	Do.
Canada	1891	4,829,411	1889	998,823	20.8	1.85	Do.
Western States (United States)	1890	3,027,613	1890	574,315	19.0	3.34	Do.
Jamaica	<i>b</i> 1891	639,491	1890	75,680	11.8	*.21	Do.
Surinam	1889	55,968	1889	5,684	10.0	.....	Pay and free schools.
Guiana (British)	1891	284,887	1890	27,884	9.8	.41	Do.
Trinidad	1890	208,030	1890	19,685	9.4	.70	Do.
Uruguay	1889	683,943	1888	54,513	8.0	.75	Do.
Paraguay	1887	329,645	1891	25,594	8.0	.89	Free.
Honduras (British)	1891	31,471	1890	2,459	8.0	*.32	Pay and free schools.
Costa Rica	1891	238,782	1890	17,500	7.3	1.55	Free.
Argentine Republic	1887	4,086,492	1890	276,983	6.8	*2.55	Do.
Guiana (French)	<i>b</i> 1890	25,796	1888	1,658	6.4	.....	.....
Martinique and Guadeloupe	1888	324,462	1888	18,073	5.5	.....	.....
Honduras	1889	431,917	1890	23,000	5.3	*.32	Pay and free schools.
Venezuela	1890	2,285,054	1891	104,840	5.0	*.16	Free.
Mexico	1889	11,632,924	1888	543,977	4.7	.32	Do.
Ecuador	<i>b</i> 1889	1,271,861	1890	58,308	4.6	.....	Do.
Chile	1891	2,766,747	1888	122,664	4.4	.....	Do.
Guatemala	<i>b</i> 1890	1,452,003	1890	57,380	4.0	.37	Do.
Salvador	1891	777,895	1889	28,473	3.7	.....	.....
Cuba	1890	1,521,684	1887	50,000	3.3	.....	.....
Nicaragua	<i>b</i> 1890	400,000	1887	11,914	3.0	.....	.....
Peru	1886	2,700,945	1890	71,435	2.6	.11	Pay and free schools.
Colombia	1881	3,878,600	1889	93,187	2.4	.....	Free.
Bolivia	1888	1,192,162	1890	27,764	2.3	*.63	Do.
Brazil	1888	14,002,335	1889	395,193	2.2	.51	Do.
Santo Domingo	1888	610,060	1890	<i>a</i> 10,000	1.6	.....	Do.
Haiti	1887	960,000	1890	<i>a</i> 10,000	1.0	.....	Do.
Puerto Rico	1890	806,768	.....	.....	.....	.....	.....

* From State only.

a Depreciated paper money.*b* Estimated.

DIAGRAM III. Education in America, 1890. Ratio to population under school influence.

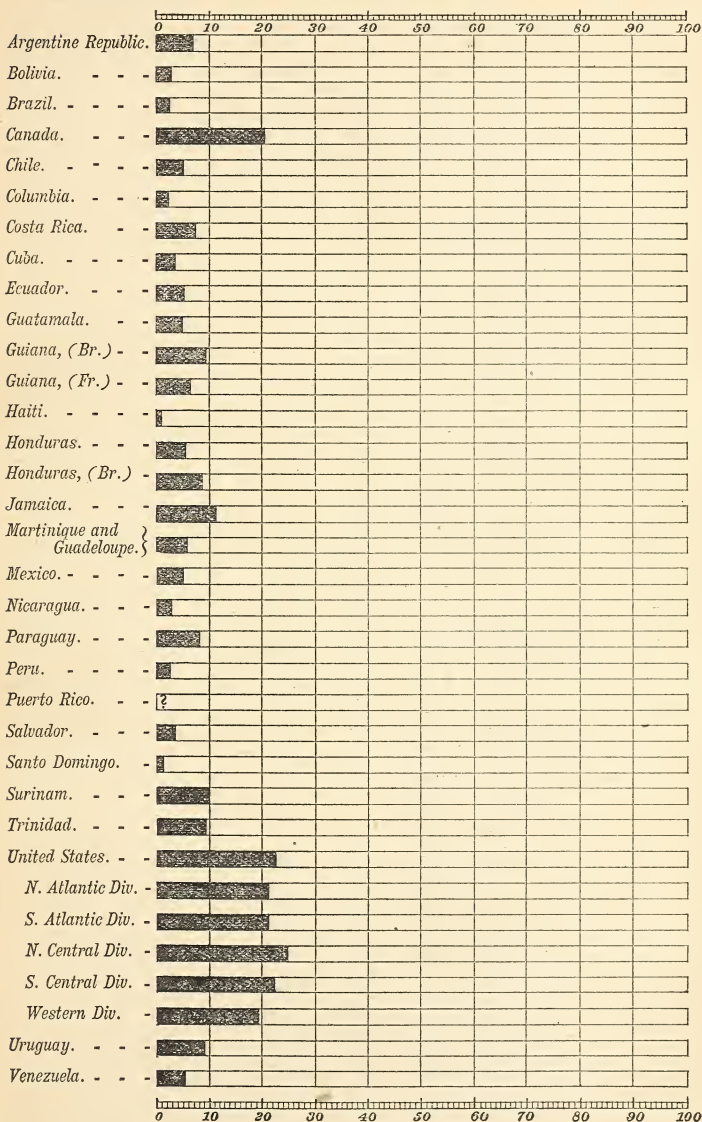


DIAGRAM IV. Education in America, 1890. Ratio to population under school influence.



CHAPTER XVII.

FOREIGN UNIVERSITIES.

- I.—Arranged according to date of founding.
- II.—Arranged according to number of students.
- III.—Arranged alphabetically, giving—
 - (a) Place.
 - (b) Correct name.
 - (c) Faculties, and
 - (d) Number of professors and students.
- IV.—Arranged according to countries.

INTRODUCTION.

The authors of "*Minerva, Jahrbuch der Universitäten der Welt*," which is the chief source of information offered in the following four lists, say that they have submitted their work at various stages of completion to different professors of the countries mentioned, so that they are assured that their decision as to which of the learned institutions of the world should be regarded as universities is upheld by the most trustworthy authority. They call their "*Jahrbuch*" a collection of names of teaching bodies of universities or similar institutions of the world. The authors, however, admit that, despite the most rigorous search, a few of the smaller institutions on the Western Hemisphere escaped their notice. Since this Report of the Bureau of Education contains direct information concerning the superior institutions of the United States, the latter have been omitted from the following lists:

FOREIGN UNIVERSITIES.

[After "*Minerva*," by Kukula & Trübner.]

I.—Arranged according to their age.

Date of foundation.	Locality.	Date of formation.	Locality.
<i>Twelfth century.</i>		<i>Thirteenth century—Continued.</i>	
1119	Bologna, Italy.	1264	Ferrara, Italy.
1180	Montpellier, France.	1290	Coimbra, Portugal.
1200	Paris, France.	Before 1300	Lyons, France.
<i>Thirteenth century.</i>		<i>Fourteenth Century.</i>	
1266 or	Oxford, England.	1303	Rome, Italy.
1249 }		1307	Perugia, Italy.
1209 }	Valencia, Spain.	1316	Pisa, Italy.
1222 }	Padua, Italy.	1339	Grenoble, France.
1224 }	Naples, Italy.	1346	Valladolid, Spain.
1229 }	Toulouse, France.	1347 or	Prague, Bohemia, Austria.
1239 or	Salamanca, Spain.	1348 }	
1250 }			
1257 }	Cambridge, England.	1361	Pavia, Italy.

I.—Arranged according to their age—Continued.

Date of formation.	Locality.	Date of formation.	Locality.
<i>Fourteenth century—Continued.</i>		<i>Eighteenth century—Continued.</i>	
1364	Crakow, Poland, Austria.	1737	Göttingen (Hanover), Prussia, Germany.
1365	Vienna, Austria.	1743	Erlangen, Bavaria, Germany.
1386	Heidelberg, Baden, Germany.	1755	Moscow, Russia.
<i>Fifteenth century.</i>		1777	Siena, Italy.
1402	Würzburg, Bavaria, Germany.	1779	Palermo, Sicily, Italy.
1404	Turin, Italy.	1780	Grosswardein, Hungary.
1409	Aix, France.	1784	Lemberg, Galicia, Austria.
1411	St. Andrews, Scotland.	1786	Münster, Prussia, Germany.
1419	Rostock, Mecklenburg, Germany.	1800	Kazan, Russia.
1426	Louvain, Belgium.	<i>Nineteenth century.</i>	
1431	Poitiers, France.	1804	Charkow, Russia.
1433	Caen, France.	1808	Clermont, France.
1438	Florence, Italy.	1808	Rennes, France.
1445	Catania, Sicily, Italy.	1809	Berlin, Prussia, Germany.
1450	Barcelona, Spain.	1816	Ghent, Belgium.
1450 or?	Glasgow, Scotland.	1816	Lüttich (Liege), Belgium.
1451		1816	Warsaw, Poland, Russia.
1456	Greifswald, Prussia, Germany.	1818	Bonn, Prussia, Germany.
1457	Freiburg, Baden, Germany.	1819	St. Petersburg, Russia.
1460	Basel, Switzerland.	1826	London (Univ. College), England.
1463	Nantes, France.	1827	Sierra Leone (Fourah Bay College), Africa.
1465	Budapest, Hungary.	1827	Toronto, Canada.
1472	Bordeaux, France.	1827	Sheffield (Med. College), England.
1472	Munich, Bavaria, Germany.	1828	Lampeter (St. David's College), Wales.
1474	Saragossa, Spain.	1832	Durham, England.
1476	Upsala, Sweden.	1832	Zürich, Switzerland.
1477	Innsbruck, Tyrol, Austria.	1834	Brussels, Belgium.
1477	Tübingen, Württemberg, Germany.	1834	Berne, Switzerland.
1478	Copenhagen, Denmark.	1836	London (University), England.
1494	Aberdeen, Scotland.	1837	Athens, Greece.
1498	Madrid, Spain.	1845	Belfast, England.
<i>Sixteenth century.</i>		1845	Galway, Ireland.
1502	Halle-Wittenberg, Prussia, Germany.	1849	Algiers, Algeria.
1504	Sevilla, Spain.	1850	Sydney, Australia.
1506	Breslau, Prussia, Germany.	1851	Newcastle, England.
1527	Marburg, Prussia, Germany.	1853	Melbourne, Victoria, Australia.
1531	Granada, Spain.	1857	Calcutta, India.
1532	Santiago, Spain.	1860	Jassy, Roumania.
1537	Lausanne, Switzerland.	1864	Bucharest, Roumania.
1540	Macerata, Italy.	1865	Odessa, Russia.
1544	Königsberg, Prussia, Germany.	1866	Neuchâtel, Switzerland.
1548	Messina, Sicily, Italy.	1868	Tokio, Japan.
1558	Jena, Thuringia, Germany.	1872	Aberystwith, Wales.
1559	Geneva, Switzerland.	1874	Agram, Croatia, Hungary.
1562	Sassari, Italy.	1875	Angers, France.
1564	Pesçon, France.	1875	Czernowitz, Bukowina, Austria.
1567	Strasbourg, Alsace, Germany.	1876	Bristol, England.
1568	Braunsberg, Prussia, Germany.	1878	Stockholm, Sweden.
1572	Nancy, France.	1879	Sheffield (Firth College), England.
1575	Leiden, Holland.	1880	Dublin, University of Ireland.
1580	Klausenburg, Hungary.	1880	Dundee, Scotland.
1580	Oviedo, Spain.	1880	Manchester, England.
1583	Edinburgh, Scotland.	1880	Nottingham, England.
1585	Graz, Styria, Austria.	1882	Prague (Bohemian Univ.), Austria.
1588	Kiew (Kieff), Russia.	1883	Cardiff, Wales.
1591	Dublin, Ireland.	1888	Lille, France.
<i>Seventeenth century.</i>		1883	Sophia, Bulgaria.
1603	Cagliari, Italy.	1889	Freiburg, Switzerland.
1606	Parma, Italy.	1889	Sheffield (Technol.), England.
1607	Giessen, Hessa, Germany.	1891	Gothenburg, Sweden.
1614	Groningen, Holland.	<i>Date not known.</i>	
1632	Amsterdam, Holland.	Genoa, Italy.	
1632	Dorpat (German), Russia.	Manila, Philippine Islands.	
1636	Utrecht, Holland.	Belgrade, Servia.	
1640	Helsingfors, Finland, Russia.	Modena, Italy.	
1665	Kiel, Prussia, Germany.	Dijon, France.	
1666	Lund, Sweden.	Tomsk, Siberia, Russia.	
1671	Urbino, Italy.	Bangor, Wales.	
<i>Eighteenth century.</i>		Cadiz, Spain.	
1710	Barbados (Codrington College), West Indies.	Cork, Ireland.	
1727	Camerino, Italy.	Leeds, England.	
1737	Christiania, Norway.	Liverpool, England.	

FOREIGN UNIVERSITIES.

II.—Arranged according to number of students.

[The attendance stated is that of winter 1890-'91.]

Order.	Locality.	No. of students.	Order.	Locality.	No. of students.
1	Paris.....	9,215	68	Greifswald.....	832
2	Vienna.....	6,220	69	Geneva.....	819
3	Berlin.....	5,527	70	Poitiers.....	807
4	Calcutta.....	5,527	71	Berne.....	800
5	London.....	5,013	72	Manila.....	758
6	Naples.....	4,328	73	Zürich.....	725
7	Edinburgh.....	3,623	74	Tokio.....	717
8	Munich.....	3,551	75	Rennes.....	714
9	Budapest.....	3,533	76	Nancy.....	689
10	Athens.....	3,500	77	Utrecht.....	687
11	Moscow.....	3,473	78	Königsberg.....	628
12	Leipzig.....	3,458	79	Jena.....	675
13	Madrid.....	3,182	80	Pisa.....	645
14	Prague (Bohemian).....	2,361	81	Dublin (University of Ireland).....	600
15	St. Petersburg.....	2,200	82	Manchester.....	590
16	Glasgow.....	2,180	83	Algiers.....	568
17	Turin.....	2,052	84	Klausenburg.....	565
18	Löwen (Louvain).....	1,891	85	Belgrade.....	562
19	Copenhagen.....	1,820	86	Bristol.....	558
20	Nottingham.....	1,805	87	Giessen.....	549
21	Brussels.....	1,795	88	Sydney.....	529
22	Dorpat.....	1,784	89	Sheffield (Technol.).....	518
23	Oxford.....	1,782	90	Toronto.....	502
24	Helsingfors.....	1,738	91	Kiel.....	489
25	Upsala.....	1,700	92	Melbourne.....	475
26	Barcelona.....	1,639	93	Florence.....	463
27	Halle-Wittenberg.....	1,584	94	Odessa.....	450
28	Prague (German).....	1,580	95	Agram.....	429
29	Rome.....	1,549	96	Basel.....	426
30	Lyons.....	1,544	97	Groningen.....	411
31	Würzburg.....	1,544	98	Münster.....	385
32	Christiania.....	1,537	99	Rostock.....	371
33	Bordeaux.....	1,524	100	Oviedo.....	334
34	Bologna.....	1,510	101	Neuchâtel.....	327
35	Kiew (Kieff).....	1,500	102	Modena.....	319
36	Lüttich (Liege).....	1,470	103	Messina.....	310
37	Tübingen.....	1,393	104	Chernowitz.....	301
38	Bonn.....	1,386	105	Aix.....	300
39	Graz.....	1,386	106	Dijon.....	300
40	Coimbra.....	1,367	107	Lausanne.....	299
41	Padua.....	1,315	108	Parma.....	271
42	Palermo.....	1,250	109	Tomsk.....	270
43	Breslau.....	1,246	110	Jassy.....	250
44	Toulouse.....	1,232	111	Besançon.....	239
45	Freiburg, Germany.....	1,230	112	Durham.....	215
46	Crakow.....	1,227	113	Sheffield (college).....	211
47	Heidelberg.....	1,171	114	St. Andrews.....	208
48	Lemberg.....	1,170	115	Sophia.....	202
49	Montpellier.....	1,141	116	Newcastle.....	201
50	Warsaw.....	1,123	117	Ferrara.....	191
51	Dublin (University of Dublin).....	1,103	118	Stockholm.....	186
52	Pavia.....	1,095	119	Siena.....	183
53	Erlangen.....	1,054	120	Perugia.....	178
54	Cambridge.....	1,027	121	Cardiff.....	170
55	Amsterdam.....	1,007	122	Freiburg, Switzerland.....	155
56	Charkow.....	1,007	123	Aberystwith.....	153
57	Innsbruck.....	1,002	124	Cagliari.....	147
58	Leiden.....	990	125	Sassari.....	132
59	Saragossa.....	966	126	Clermont.....	125
60	Bucharest.....	965	127	Macerata.....	115
61	Marburg.....	952	128	Grosswarden.....	107
62	Strasbourg.....	947	129	Camerino.....	96
63	Genoa.....	940	130	Urbino.....	93
64	Göttingen.....	890	131	Montauban.....	59
65	Aberdeen.....	889	132	Braunsberg.....	41
66	Lund.....	885	133	Barbados.....	22
67	St. Petersburg (Medical Acad- emy).....	872	134	Sicra Leone.....	12

The number of students in universities not mentioned in this list had not been ascertained.

FOREIGN UNIVERSITIES.

III.—Arranged alphabetically, with exact titles, and faculties, and number of professors and students.

1. *Aberdeen, Scotland: University of Aberdeen.* 27 professors, 889 students. Philosophical, theological, law, and medical faculties; library and archæological museum.
2. *Aberystwith, Wales: University College of Wales.* 18 professors, 153 students.
3. *Agram, Croatia, Hungary: Königl. Universität Agram.* 48 professors, 429 students. Theological, law, and philosophical faculties; library.
4. *Aix-en-Provence, France: Facultés d'Aix.* 23 professors, about 300 students. Law and philosophical faculties; library.
5. *Algiers, Algeria, France: Facultés d'Alger.* 53 professors, 568 students. Law, medical, scientific, and philosophical faculties; library.
6. *Amsterdam, Netherlands: Universiteit te Amsterdam.* 66 professors, 1,007 students. Law, medical, scientific, philosophical, and theological faculties; library.
7. *St. Andrews, Scotland: University of St. Andrews.* 17 professors, 208 students. St. Salvador and St. Leonard's College, and College of St. Mary.
8. *Angers, France: Facultés Catholiques Libres.* 34 professors. Law, scientific, and philosophical faculties; library.
9. *Athens, Greece: Τὸ ἐν Ἀθήναις ἑθνικὸν Πανεπιστήμιον.* 120 professors, 3,500 students. Theological, law, medical, and philosophical faculties; public library.
10. *Bangor, Wales: University College of North Wales.* 26 professors.
11. *Barbados, West Indies: Codrington College.* 4 professors, 22 students.
12. *Barcelona, Spain: Universidad de Barcelona.* 55 professors, 1,639 students. Philosophical, law, scientific, medical, and pharmaceutical faculties.
13. *Basel, Switzerland: Universität Basel.* 87 professors, 426 students. Theological, law, medical, and philosophical faculties; public library.
14. *Belfast, Ireland: Queen's College.* 22 professors.
15. *Belgrade, Servia: Srpska Kraljerska Velika Škola.* 36 professors, 562 students. Philosophical, law, and technical faculties; library.
16. *Berlin, Prussia, Germany: Königl. Friedr.-Wilhelms-Universität.* 343 professors, 5,527 students. Theological, law, medical, and philosophical faculties; seminary for oriental languages; library.
17. *Berne, Switzerland: Universität Bern.* 115 professors, 800 students. Catholic and Protestant theology, law, medical, and philosophical faculties; city library.
18. *Besançon, France: Facultés de Besançon.* 37 professors, 239 students. Scientific, philosophical, and medical faculties; library.
19. *Bologna, Italy: Regia Università di Bologna.* 161 professors, 1,510 students. Philosophical, scientific, law, medical, and pharmaceutical faculties; veterinary and engineer's schools; library.
20. *Bonn, Prussia, Germany: Rheinische Friedr.-Wilhelms-Universität.* 118 professors, 1,386 students. Protestant and Catholic theology, law, medical, and philosophical faculties; library.
21. *Bordeaux, France: Facultés de Bordeaux.* 96 professors, 1,524 students. Law, medical, scientific, and philosophical faculties; libraries (2).
22. *Braunsberg, Prussia, Germany: Königl. Lyceum Hosianum.* 10 professors, 41 students. Theological and philosophical faculties; library.
23. *Breslau, Prussia, Germany: Königl. Univ. zu Breslau.* 131 professors, 1,246 students. Catholic and Protestant theological, law, medical, and philosophical faculties; library.

24. *Bristol, England: University College.* 43 professors, 558 students (239 women). College faculty and medical school; library.
25. *Brussels, Belgium: Université libre de Bruxelles.* 99 professors, 1,795 students. Philosophical, law, scientific, medical, and pharmaceutical faculties; also polytechnical school and library.
26. *Bucharest, Roumania: Universitatea din Bucuresti.* 70 professors, 965 students (33 women). Scientific, philosophical, law, medical, and theological faculties; library.
27. *Budapest, Hungary: Királyi Magyar Tudomány-Egyetum.* 170 professors, 3,533 students. Theological, law, medical, and philosophical faculties; library.
28. *Cadiz, Spain: Facultad de Medicina* (belonging to Sevilla). 14 professors. Medical faculty; library.
29. *Caen, France: Faculté de Caen.* 36 professors. Law, scientific, and philosophical faculties; library.
30. *Cagliari, Sardinia, Italy: Regia Università di Cagliari.* 38 professors, 147 students. Law, medical, and scientific faculties; library.
31. *Calcutta, India: University of Calcutta.* 175 examiners, 5,257 candidates. Examining board; library.
32. *Cambridge, England: University of Cambridge.* 221 professors, 1,027 students. Schools of theology, law, Oriental, classical, and modern philology, music, moral science, history, and archaeology, astronomy, physics, chemistry, mineralogy, biology, geology, and medicine; library.
33. *Camerino, Italy: Libera Università degli Studi di Camerino.* 29 professors, 96 students. Law, medical, and pharmaceutical faculties and veterinary school; communal library.
34. *Cardiff, Wales: University College of South Wales.* 26 professors, 170 students. Philosophical and scientific faculties and department of engineering; library.
35. *Catania, Sicily, Italy: Regia Università degli Studi di Catania.* 90 professors. Law, medical, scientific, and philosophical faculties; library.
36. *Charkow, Russia: Imperatorskij Charkowskij Universitet.* 99 professors, 1,007 students. Philosophical, scientific, law, and medical faculties; library.
37. *Christiania, Norway: Kongelige Frederiks Universitet.* 75 professors, 1,537 students. Theological, law, medical, philosophical, and scientific faculties; library.
38. *Clermont, France: Faculté de Clermont.* 20 professors. Scientific and philosophical faculties; library.
39. *Coimbra, Portugal: Universidade de Coimbra.* 71 professors, 1,367 students. Theological, law, medical, and scientific faculties; library.
Copenhagen. (See Kjobenhavn.)
40. *Cork, Ireland: Queen's College.* 24 professors, 245 students.
Crakaw. (See Krakau.)
41. *Czernowitz, Bukowina, Austria: K. K. Franz-Josephs-Universität.* 41 professors, 301 students. Theological, law, and philosophical faculties; library.
42. *Dijon, France: Faculté de Dijon.* 33 professors, 300 students. Law, scientific, and philosophical faculties; library.
43. *Dorpat, Russia: Kaiserliche Universität.* 73 professors, 1,784 students. Law, theological, medical, and philosophical faculties.
44. *Dublin, Ireland: University of Dublin.* 42 professors, 1,103 students.
45. *Dublin, Ireland: Royal University of Ireland.* 65 examiners and about 600 candidates. Examining boards.
46. *Dundee, Scotland: University College.* 17 professors.
47. *Durham, England: Durham University.* 15 professors, 215 students. To this university belong the Codrington College, on the island of Barbados, and the Fourah Bay College, in Sierra Leone; also the College of Science, at Newcastle on Tyne.

48. *Edinburgh, Scotland: University of Edinburgh.* 57 professors, 3,623 students. Philosophical, theological, law, and medical faculties; library.
49. *Erlangen, Bavaria, Germany: K. Bayerische Fr.-Alex.-Universität.* 60 professors, 1,054 students. Theological, law, medical, and philosophical faculties; library.
50. *Ferrara, Italy: Libera Università di Ferrara.* 23 professors, 191 students. Law-scientific, and medical faculties; library.
51. *Florence, Italy: R. Istituto di Studi Superiori Praticie di Perfezionamento in Firenze.* 74 professors, 463 students. Philosophical, scientific, medical, and pharmaceutical faculties; library.
52. *Freiburg, Baden, Germany: Badische Alb.-Ludw.-Universität.* 105 professors, 1,230 students. Theological, law, medical, and philosophical faculties; library.
53. *Freiburg, Switzerland: Katholische Universität.* 43 professors, 155 students. Theological, law, and philosophical faculties; library.
54. *Galway, Ireland: Queen's College.* 20 professors.
55. *Geneva, Switzerland: Université de Genève.* 85 professors, 819 students. Theological, law, medical, philosophical, and scientific faculties; five libraries.
56. *Genoa, Italy: R. Università degli Studi di Genova.* 90 professors, 940 students. Law, medical, scientific, and philosophical faculties, and schools of engineering and pharmaceutics; library.
57. *Ghent, Belgium: Université de Gand.* 77 professors. Philosophical, law, scientific, and medical faculties; library.
58. *Giessen, Hessa, Germany: Hessische Ludwigs-Universität.* 61 professors, 549 students. Theological, law, medical, and philosophical faculties; library.
59. *Glasgow, Scotland: University of Glasgow.* 41 professors, 2,180 students.
60. *Gothenburg, Sweden: Göteborgs Högskola.* 8 professors.
61. *Göttingen, Prussia, Germany: Georg-Augusts-Universität.* 124 professors, 890 students. Theological, law, medical, and philosophical faculties; library.
62. *Granada, Spain: Universidad de Granada.* 44 professors, 1,531 students. Philosophical, law, scientific, medical, and pharmaceutical faculties; library.
63. *Gratz, Styria, Austria: K. K. Karl-Franzens-Universität.* 108 professors, 1,585 students. Theological, law, medical, and philosophical faculties; library.
64. *Greifswald, Prussia, Germany: Universität.* 80 professors, 832 students. Theological, law, medical, and philosophical faculties; library.
65. *Grenoble, France: Facultés de Grenoble.* 33 professors. Law, scientific, and philosophical faculties; library.
66. *Groningen, Netherlands: Rijks-Universitet te Groningen.* 45 professors, 411 students. Theological, law, medical, scientific, and philosophical faculties; library.
67. *Grosswardein, Hungary: Jégakademia.* 10 professors, 107 students. Law faculty.
68. *Halle, Prussia, Germany: Friedr.-Universität Halle-Wittenberg.* 137 professors, 1,584 students.
69. *Heidelberg, Baden, Germany: Ruprecht-Karls-Universität.* 115 professors, 1,171 students. Theological, law, medical, philosophical, and scientific faculties; library.
70. *Helsingfors, Finland, Russia: Kajsersliga Alexanders Universitet i Finland.* 92 professors, 1,238 students. Theological, law, medical, and philosophical faculties; public library.
71. *Jena, Thuringia, Germany: Sächsische Gesamt-Universität.* 94 professors, 675 students. Theological, law, medical, and philosophical faculties; library.
72. *Innsbruck, Tyrol, Austria: K. K. Leopold-Franzens-Universität.* 90 professors, 1,002 students. Theological, law, medical, and philosophical faculties; library.
73. *Kazan, Russia: Imperatorskij Kazanskij Universitet.* 97 professors. Philosophical, scientific, law, and medical faculties; library.

74. *Kiel*, Prussia, Germany: *K. Christian-Albrechts-Universität*. 93 professors, 489 students. Theological, law, medical, and philosophical faculties; library.
75. *Kiew or Kieff*, Russia: *Imperatorskij Universitet*. 38 professors (in medical faculty only) and 1,500 students in all faculties. Medical faculty and other faculties specified.
76. *Kjbenhavn*, Denmark: *Kjopenhavns Universitet*. 123 professors, 1,820 students. Theological, law, medical, philosophical, and scientific faculties and polytechnic institute; library.
77. *Klausenburg*, Siebenbürgen, Hungary: *K. K. Klausenburger Universität*. 62 professors, 565 students. Law, medical, philosophical, and scientific faculties; library.
78. *Königsberg*, Prussia, Germany: *K. Albertus-Universität*. 95 professors, 682 students. Theological, law, medical, and philosophical faculties; royal and university library.
79. *Krakau*, Galicia, Austria: *Jagellonische Universität Krakau*. 86 professors, 1,227 students. Theological, law, medical, and philosophical faculties; library.
80. *Lampeter*, Wales: *St. David's College*. 14 professors.
81. *Lausanne*, Switzerland: *Université de Lausanne*. 66 professors, 299 students. Theological, law, medical, philosophical, and scientific faculties.
82. *Leeds*. (See Manchester.) *Yorkshire College*.
83. *Leiden*, Netherlands: *Rijks-Universitet te Leiden*. 57 professors, 990 students. Medical, scientific, philosophical, theological, and law faculties; library.
84. *Leipzig*, Saxony, Germany: *Universität*. 200 professors, 3,468 students. Theological, law, and philosophical faculties; library.
85. *Lemberg*, Galicia, Austria: *K. K. Franzens-Universität in Lemberg*. 65 professors, 1,170 students. Theological, law, and philosophical faculties; library.
86. *Lille*, France: *Facultés de Lille*. 73 professors. Law, medical, scientific, and philosophical faculties.
87. *Lille*, France. *Facultés Libres*. 56 professors. Theological, law, medical, scientific, and philosophical faculties.
88. *Liverpool*. (See Manchester.) *University College*.
89. *London*, England. *University of London*. 71 examiners, 5,013 candidates. Examining board; library. To the university belong—
 - (1) *University College*, with philosophical, law, scientific, and medical faculties and library. 70 professors.
 - (2) *King's College*, with theological, philosophical, and medical faculties; library. 84 professors.
 - (3) *Trinity College*, with 9 professors and 37 musical teachers.
 - (4) *School for Modern Oriental Languages*, with 16 professors.
90. *Löwen* (or *Louvain*), Belgium. *Université Catholique de Louvain*. 88 professors, 1,891 students. Theological, law, medical, philosophical, and scientific faculties; library.
91. *Lund*, Sweden: *Kongl. Universitet i Lund*. 77 professors, 885 students. Theological, law, medical, and philosophical faculties; library.
92. *Lüttich* (Liege), Belgium: *Université de Liège*. 79 professors, 1,470 students. Philosophical, law, scientific, and medical faculties; library.
93. *Lyons*, France: *Facultés Libres*. 42 professors, 1,544 students. Theological, law, scientific, and philosophical faculties.
94. *Lyons*, France: *Facultés de Lyon*. 92 professors. Law, medical, scientific, and philosophical faculties; 2 libraries.
95. *Macerata*, Italy: *Regia Università di Macerata*. 11 professors, 115 students. Law faculty.
96. *Madrid*, Spain: *Universidad Central de España*. 106 professors, 3,182 students. Philosophical, law, scientific, medical, and pharmaceutical faculties; libraries.

97. *Manchester, Liverpool, and Leeds, England.* *Victoria University* consists of—

(1) <i>Owens College, Manchester.</i>	39 professors.	}	590 students.
(2) <i>University College, Liverpool.</i>	30 professors.		
(3) <i>Yorkshire College, Leeds.</i>	26 professors.		
98. *Manila, Philippine Islands: Real y Pontificia Universidad de Santo Tomás de Manila.* 46 professors, 758 students. Theological, law, medical, and pharmaceutical faculties; library.
99. *Marburg, Hessia, Germany: Universität Marburg.* 91 professors, 952 students. Theological, law, medical, philosophical, and scientific faculties; library.
100. *Marseilles, France: Belongs to Facultés d'Aix.* 53 professors. Scientific, medical, and law faculties; library.
101. *Melbourne, Victoria, Australia: University of Melbourne.* 35 professors, 475 students.
102. *Messina, Italy: Regia Università degli Studi di Messina.* 86 professors, 310 students. Law, medical, scientific, philosophical, and pharmaceutical faculties; library.
103. *Modena, Italy: Regia Università degli Studi di Modena.* 86 professors, 319 students. Law, medical, scientific, and pharmaceutical faculties; library.
104. *Montauban, France: Belongs to Facultés de Montpellier.* 74 professors, 59 students. Law, medical, scientific, and philosophical faculties; library.
105. *Montpellier, France: Facultés de Montpellier.* 74 professors. Law, medical, scientific, and philosophical faculties; library.
106. *Moscow, Russia: Imperatorskij Moskovskij Universitet.* 160 professors, 3,473 students. Philosophical, scientific, law, and medical faculties; library.
107. *Munich, Bavaria, Germany: K. Bayrische Ludwig-Maximilians-Universität.* 169 professors, 3,551 students. Theological, law, medical, and philosophical faculties; library.
108. *Münster, Prussia, Germany: K. Preuss. Theol. u. Philosophische Akademie.* 45 professors, 385 students. Theological and philosophical faculties; library.
109. *Nancy, France: Facultés de Nancy.* 83 professors, 689 students. Law, medical, scientific, and philosophical, faculties and pharmaceutical school; library.
110. *Nantes, France: École de Médecine de Nantes.* 25 professors.
111. *Nantes, France: École Libre de Droit.* 15 professors.
112. *Naples, Italy: Regia Università degli Studi di Napoli.* 283 professors; 4,328 students. Philosophical, law, mathematical, scientific, and medical faculties and pharmaceutical school; library.
113. *Neuchâtel, Switzerland: Académie de Neuchâtel.* 39 professors, 327 students. Philosophical, scientific, theological, and law faculties; library.
114. *Newcastle, England: The colleges belong to Durham University.*
 - (1) *College of Medicine.* 19 professors, 201 students.
 - (2) *College of Science.* 18 professors, 63 students.
115. *Nottingham, England: University College.* 33 professors; 1,805 students. Philosophy, law, and scientific faculties, and school of engineering; free public libraries.
116. *Odessa, Russia: Noworossijskij Universitet.* 65 professors, 450 students. Philosophical, scientific, and law faculties; library.
117. *Oviedo, Spain: Universidad Literaria de Oviedo.* 18 professors, 334 students. Law faculty; library.
118. *Oxford, England: University of Oxford.* 97 professors; 1,782 students. Theological, law, medical, scientific, and philosophical faculties. Bodleian library.
119. *Padua, Italy: Regia Università degli Studi di Padua.* 136 professors; 1,315 students. Law, medical, scientific, and philosophical faculties, and schools of engineering and pharmacy; library.
120. *Palermo, Sicily, Italy: Regia Università degli Studi di Palermo.* 101 professors; 1,250 students. Law, medical, scientific, and philosophical faculties, and schools of engineering and pharmacy; libraries.

121. *Paris, France: (1) Facultés de Paris.* 228 professors, 9,215 students. Protestant theological, law, medical, scientific, and philosophical faculties, and schools of engineering and pharmacy; libraries.
122. *Paris, France: (2) Facultés Libres.* 40 professors. Law and philosophical faculties; library.
123. *Paris, France: (3) Collège de France.* 44 professors.
124. *Paris, France: (4) Muséum d'histoire naturelle.* 20 professors.
125. *Paris, France: (5) École pratique des hautes études en Sorbonne.* 48 professors. Philosophical and theological faculties; library.
126. *Paris, France: (6) École nationale des beaux-arts.* 7 professors.
127. *Paris, France: (7) École nationale de chartes.* 8 professors.
128. *Paris, France: (8) École du Louvre.* 9 professors.
129. *Paris, France: (9) École des langues orientales vivantes.* 21 professors.
130. *Parma, Italy: Regia Università degli Studi di Parma.* 68 professors, 271 students. Law, medical, and scientific faculties, and veterinary and pharmaceutical schools.
131. *Pavia, Italy: Regia Università degli Studi di Pavia.* 95 professors, 1,095 students. Law, medical, scientific, and philosophical faculties; pharmaceutical school and library.
132. *Perugia, Italy: Università Libera degli Studi di Perugia.* 32 professors, 728 students. Law and medical faculties, and pharmaceutical and veterinary schools; library.
133. *St. Petersburg, Russia: Imperatorskij Universitet.* 124 professors, 2,200 students. Philosophical, scientific, law, and oriental languages faculties; library.
134. *St. Petersburg, Russia: Imperatorskij Wojeusio-Medicinskaja Akademje.* 82 professors, 872 students. Medical faculty; library.
135. *Pisa, Italy: Regia Università degli Studi di Pisa.* 96 professors, 645 students. Law, philosophical, medical, and scientific faculties, and engineering, pharmaceutical, veterinary, and agricultural schools; library.
136. *Poitiers, France: Facultés de Poitiers.* 32 professors, 807 students. Law, scientific, and philosophical faculties; library.
137. *Prague, Bohemia, Austria: K. K. Deutsche Carl-Ferdinands-Universität.* 115 professors, 1,580 students. Theological, law, medical, and philosophical faculties; library.
138. *Prague, Bohemia, Austria: C. K. česk. Universitet Karlo-Ferdinandorij.* 98 professors, 2,361 students. Theological, law, medical, and philosophical faculties; library.
139. *Presburg, Hungary: Jógakademia.* 13 professors. Law and philosophical faculties; library.
140. *Reunes, France: Facultés de Reunes.* 34 professors, 714 students. Law, scientific, and philosophical faculties; library.
141. *Rome, Italy: Regia Università degli Studi di Roma.* 173 professors, 1,549 students. Philosophical, scientific, law, and medical faculties; engineering and pharmaceutical schools; library. Alessandrina.
142. *Rostock, Mecklenburg, Germany: Grossherzogliche Universität.* 46 professors, 371 students. Theological, law, medical, and philosophical faculties; library.
143. *Salamanca, Spain: Universidad de Salamanca.* 21 professors. Philosophical and law faculties; library.
144. *Santiago, Chile:* Closed during the civil war.
145. *Santiago, Spain: Universidad de Santiago.* 33 professors. Law, medical, and pharmaceutical faculties; library.
146. *Saragossa, Spain: Universidad de Zaragoza.* 46 professors, 966 students. Philosophical, law, scientific, and medical faculties; provincial library.

147. *Sassari, Italy: Regia Università degli Studi di Sassari.* 37 professors, 132 students. Law, medical, and pharmaceutical faculties; library.
148. *Sevilla, Spain: Universidad de Sevilla.* 27 professors. Philosophical, law, and scientific faculties; library.
149. *Sheffield, England: (1) Firth College (belongs to Oxford University).* 16 professors, 211 students. *(2) Technical School.* 11 professors, 518 students. *(3) School of Medicine.* 21 professors.
150. *Siena, Italy: Regia Università degli Studi di Siena.* 43 professors, 183 students. Law, and medical faculties, and pharmaceutical schools; library.
151. *Sierra Leone, Africa: Fourah Bay College (belongs to Durham University).* 5 professors, 12 students.
152. *Sophia, Bulgaria: Wische utschilische w Sofija.* 20 professors, 202 students.
153. *Stockholm, Sweden: Stockholms Högskola.* 14 professors, 186 students.
154. *Strasburg, Alsace, Germany: Kaiser Wilhelm's Universität.* 127 professors, 947 students. Theological, law, medical, philosophical, and scientific faculties; provincial library.
155. *Sidney, New South Wales, Australia: University of Sidney.* 78 professors, 529 students.
156. *Tokio, Japan: Teikoku Daigaku.* 113 professors, 717 students. Law, medical, philosophical; and scientific faculties, and school of engineering; library.
157. *Tomsk, Siberia: Imperatorskij Tomskij Universitet.* 21 professors, 270 students. Theological and medical faculties; library.
158. *Toronto, Canada: University of Toronto.* 56 professors, 502 students. Philosophical, law, and medical faculties; library.
159. *Toulouse, France: Facultés de Toulouse.* 71 professors, 1,232 students. Law, philosophical, scientific, and medical faculties; library.
160. *Toulouse, France: Facultés Libres Catholiques.* 19 professors. Theological and philosophical faculties; library.
161. *Tübingen, Württemberg, Germany: Königl. Eberhard Karls-Universität.* 88 professors, 1,393 students. Theological, law, medical, philosophical, and scientific faculties; library.
162. *Turin, Italy: Regia Università degli Studi di Torino.* 133 professors, 2,052 students. Law, medical, philosophical, and scientific faculties, and pharmaceutical school; library.
163. *Upsala, Sweden: Kongl. Universitet i Upsala.* 122 professors, 1,700 students. Theological, law, medical, and philosophical faculties; library.
164. *Urbino, Italy: Libera Università degli Studi di Torino.* 33 professors, 93 students. Law and mathematical faculties and pharmaceutical and surgical schools; library.
165. *Utrecht, Netherlands: Rijks Universitet te Utrecht.* 54 professors, 687 students. Philosophical, medical, theological, law, and scientific faculties; library.
166. *Valencia, Spain: Universidad de Valencia.* 37 professors, 1,209 students. Law, scientific, and medical faculties; library.
167. *Valladolid, Spain: Universidad de Valladolid.* 34 professors. Law and medical faculties; library.
168. *Vienna, Austria: K. K. Universität.* 313 professors, 6,220 students. Law, theological, medical, and philosophical faculties; library.
169. *Vienna, Austria: Protestantische theologische Fakultät.* 7 professors.
170. *Warsaw, Poland, Russia: Imperatorskij Warschawskij Universitet.* 72 professors, 1,123 students. Philosophical, scientific, law, and medical faculties; library.
171. *Würzburg, Bavaria, Germany: Königl. Julius-Maximilians-Universität.* 76 professors, 1,544 students. Theological, law, medical, and philosophical faculties; library.
172. *Zürich, Switzerland: Schweizerische Hochschule.* 112 professors, 725 students. Philosophical, law, medical, and philosophical faculties; cantonal and city libraries.

FOREIGN UNIVERSITIES.

IV.—*Arranged according to countries.*

- Argentina.* (Two universities, not mentioned in "Minerva.")
- Australia:* Melbourne, Sidney.
- Austria:* Czernowitz, Gratz, Innsbruck, Krakau, Lemberg, Prague (German), Prague (Bohemian), Vienna (2).
- Belgium:* Brussels, Ghent, Lüttich or Liege, Löwen or Louvain.
- Bolivia.* (Four universities not mentioned in "Minerva.")
- Brazil.* (Two medical and two law schools not mentioned in "Minerva.")
- Bulgaria:* Sophia.
- Canada:* Toronto.
- Cape Colony:* Cape University (not mentioned in "Minerva").
- Chile:* Santiago.
- China.* (College of Foreign Knowledge.)
- Colombia.* (Two universities not mentioned in "Minerva.")
- Corea.* (None.)
- Costa Rica.* (None.)
- Denmark:* Copenhagen or Kjöbenhavn.
- Ecuador:* Quito (not mentioned in "Minerva").
- England* (See also Ireland, Scotland, and Wales, below): Bristol, Cambridge, Durham, Leeds, Liverpool, London (4), Manchester, Newcastle, Nottingham, Oxford, Sheffield.
- France:* Aix, Algiers, Angers, Besançon, Bordeaux, Caen, Clermont, Dijon, Grenoble, Lille (2), Marseilles, Montauban, Montpellier, Nancy, Nantes (2), Paris (9), Poitiers, Rennes, Toulouse (2).
- Germany:* Berlin, Bonn, Braunsberg, Breslau, Erlangen, Freiburg, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Münster, Rostock, Strasburg, Tübingen, Würzburg.
- Greece:* Athens.
- Guatemala.* (None.)
- Haiti.* (None.)
- Hawaii.* (None.)
- Honduras.* (Two universities, not mentioned in "Minerva.")
- Hungary:* Agram, Budapest, Grosswardein, Klausenburg, Presburg.
- India:* Calcutta.
- Ireland:* Belfast, Cork, Dublin (2), Galway.
- Italy:* Bologna, Cagliari, Camerino, Catania, Ferrara, Florence, Genoa, Macerata, Messina, Modena, Naples, Padua, Palermo, Parma, Pavia, Perugia, Pisa, Rome, Sassari, Siena, Turin, Urbino.
- Japan:* Tokio.
- Mexico.* (Schools of law, medicine, engineering, etc., not mentioned in "Minerva.")
- Montenegro.* (Theological seminary, not mentioned in "Minerva.")
- Morocco.* (None.)
- Netherlands:* Amsterdam, Groningen, Leiden, Utrecht.
- Nicaragua.* (None.)
- Norway:* Christiania.
- Orange Free State.* (A university contemplated.)
- Paraguay.* (National college, not mentioned in "Minerva.")
- Persia.* (Several colleges, not mentioned in "Minerva.")
- Peru:* Universidad de San Marcos (not mentioned in "Minerva").
- Philippine Islands:* Manila.
- Portugal:* Coimbra.
- Roumania:* Bucharest.

Russia : Charkow, Dorpat, Helsingfors, Kazan, Kiew, Moscow, Odessa, St. Petersburg, Warsaw.

Salvador. (National university, not mentioned in "Minerva.")

Santo Domingo. (None.)

Scotland : Aberdeen, St. Andrews, Dundee, Edinburgh, Glasgow.

Serbia : Belgrade.

Siam. (None.)

Siberia : Tomsk.

Sierra Leone : Furah Bay.

South African Republic : A university contemplated.

Spain : Barcelona, Cadiz, Granada, Madrid, Oviedo, Salamanca, Santiago, Saragossa, Sevilla, Valencia, Valladolid.

Sweden : Gothenburg, Lund, Stockholm, Upsala.

Switzerland : Basel, Bern, Freiburg, Geneva, Lausanne, Neuchâtel, Zürich.

Turkey. (Several colleges, not mentioned in "Minerva.")

Uruguay : Montevideo (not mentioned in "Minerva").

Venezuela. (Two universities, not mentioned in "Minerva.")

Wales : Aberystwith, Bangor, Cardiff, Lampeter.

West Indies : Barbados.

CHAPTER XVIII.

SOCIAL PATHOLOGY AND EDUCATION.¹

The term pathology includes the doctrine of disease, its nature and results. Social pathology is intended to be used as a general term and refers to any abnormal or to any diseased social conditions. It includes pauperism, crime, insanity, feeble-mindedness, alcoholism, and in general refers to all classes of individuals who, by mental, moral, or physical defects, come to be dependent upon or injurious to society as a whole. Such individuals may or may not be responsible for their condition, for it may be due to the individual himself or to his surroundings, inherited tendencies, or physical diseases over which he has had no control.

The purpose of studying social pathology is not so much ethical as scientific; that is, it does not undertake to pronounce whether the individual or society is to blame for delinquency, dependency, or defectiveness, but it seeks to analyze the causes of these abnormal or diseased social conditions, and in this respect it is a *necessary preliminary* to the prevention or amelioration of patho-social conditions. As education concerns the moral, mental, and physical development of individual and society, it bears a most intimate relation to those pathological elements that tend to social degeneration. Education here is social therapeutics; that is, a method of amelioration or prevention. The large number of weaklings in will, intellect, and body are cases included under this educative treatment. As there is no known "specific" for any of the social diseases, the general remedy is to implant and develop in individuals (the earlier the better) such mental, moral, and physical habits as will serve to prevent or lessen tendencies to delinquency, dependency, or defectiveness. Social therapeutics is therefore distinctively educational.

It is intended here to give a short account of two recent social schemes. One is that of Charles Booth, in his "Labor and Life of the People in London," and may be considered as a basis for the scientific method of social education. The other is that of Gen. Booth, and can be called the religious and moral method of social education. One is a description of the evil, its nature and causes; the other is a practical attempt to remove the evil. One is the study of the disease and its diagnosis; the other is a method of treatment and cure.

¹ By A. McDonald, specialist in education as a preventive of crime and pauperism.

A STUDY OF THE SLUMS OF LONDON, BY CHARLES BOOTH.

There is little reason to believe that the slums of one city differ essentially from those of another. A description of the London slums may therefore serve to give a general and trustworthy idea of social degeneration, and especially so since Mr. Booth's investigation is acknowledged to be the most exact yet made.

The purpose of Mr. Booth in his investigation of East London is "to show the numerical relation which poverty, misery, and depravity bear to regular earnings and comparative comfort and to describe the general conditions under which each class lives."

The division of the people into eight classes is based upon information obtained from the school board visitors, who make visitations from house to house and give the details of every family with children of school age, and the record of those children who have left school.

The inhabitants of London (not including 100,000 in charitable and penal institutions) may be classified as follows:

	Number.	Per cent.
Class A (the lowest).....	37,610	.9
Class B (the very poor).....	316,834	7.5
Classes C and D (the poor).....	938,293	22.3
Classes E and F (the comfortable working class).....	2,166,503	51.5
Classes G and H (middle class and all above).....	749,930	17.8
	4,209,170	100

The proportions may be shown graphically:



Class A is the lowest and consists of occasional laborers, loafers, and semicriminals. They are more a disgrace than a danger. This class is recruited with adult men from all the others. These recruits have met some misfortune and nearly all have lost their characters; their miseries are not due to any consciousness of their degradation, for their chief desire is to be let alone; their social improvement is in their eyes their destruction.

Class B are casual workers and very poor. The laborers of this class

do not average more than three days of work a week, and it is doubtful if they could or would work longer had they the opportunity. Their ideal is to work and play when they like; they are the "leisure class" among the poor; their condition is limited closely by the pressure of want and is habitual in the sense of being second nature. They can not endure regularity and the ennui of civilization, but find satisfaction in street life or trouble at home. Drink is not their special luxury as with class A, nor is it a passion as in the case of those with higher wages and irregular but severe work. The children of Class B obtain employment easily; if they do not earn enough they are liable to be turned adrift and may sink into the lowest class, but if industrious they may rise. Class B, and especially the labor part of it, consists of those who are mentally, morally, and physically incapable of doing better work.

Class C receive intermittent earnings, and, with class D, who gain small regular earnings, constitute what may be called the poor. Class C are especially the victims of competition, and present the most proper field for systematic charitable assistance. Their passion for drink is the most developed. The industrious of this class usually need no help. Class C, with its irregular employment and improvident habits, is the most hardly judged and used of all, yet few of them rank with the deserving.

Class D receive small regular earnings, and are poor. Some become poorer with increase of family, but improve as their children become able to work. The loss of their older children by marriage is regarded by them with jealousy and disfavor. None can be said to rise above poverty, unless by the earnings of their children. This class is not troubled by its experience of better things, nor by what is expected of it, nor by an unattainable ideal; but, like Class C (intermittent workers), it can only be helped by a movement which "shall succeed in raising the whole standard of life."

Class E receive regular standard earnings, and are by far the largest in number. Classes D and E together form the actual middle class. The numbers above and below them are nearly equal. The pride of this class causes them to resent charity. Their lot is aggravated by a raised ideal. Here, rather than the ruffianism of Class A or the starvation of Class B or the wasted energy of Class C or anxieties of Class D, they prefer socialism, if not revolution. These spontaneous feelings, that naturally arise from such conditions, are far from superficial or temporary, and can not be stopped by force, for these men have little to lose, and so react still more by force. It is to be regretted that this sentiment sometimes goes to extremes, but it can hardly be smothered, for it is not confined to any one nation, but seems to be a spontaneous movement in the present stage of human development.

Class F consists of those engaged in the higher class of labor; they are the best paid of the artisans. The foreman of ordinary labor gen-

erally sees things from the employer's point of view, while the skilled artisan sees them from the standpoint of the employed. In connection with this fact it is to be observed that foremen are a more contented body of men than the most prosperous artisans.

Class G represents the lower middle class, shopkeepers, small employers, clerks, etc., and subordinate professional men.

Class H represents the upper middle class. All above Class G may be comprised in one and called the servant-keeping class.

SOCIAL TOPOGRAPHY OF EAST LONDON.¹

In the poverty of the very poor streets and in most of the lowest class streets it is the children and women who show the condition of the family most noticeably. The windows and doors of the houses are also indicators, the brickwork around each door being black from rubbing of hands. Bird fanciers are in the mixed streets nearest the lowest districts. Fried-fish and stewed-eel shops and cat-meat shops mark the vicinity of the greatest poverty. Another sign of great poverty is where bread is seen thrown about. The candy stores are the saloons for the children of poverty. Some houses were built for those of larger means, and a dwelling intended for one family is arranged for two or three or even more families. Such conditions are obviously most favorable for the development of crime and immorality. From a study of typical streets Mr. Booth shows 5,000 persons to have occupied less than half a room. Of those who occupy less than half a room the majority live three in a room; in a few cases there are as many as seven, eight, or nine in one room. Among the poor with intermittent earnings (*Class E*) more than half occupy less than half a room. One-fourth of those above poverty (*Class E*) occupy less than half a room. Among those who have higher-class labor (*Class F*) there are few who have not at least this amount of space. There is no special reason for not believing but that what is true in regard to these 10,000 people of the lowest classes is also true in regard to the whole 3,500,000 of these classes in London. Buildings which are the property of philanthropic and semiphilanthropic associations—that is, those which do not make profit the first consideration constitute nearly all of the best blocks where there is a maximum amount of open space and light, and sanitary matters and convenience of tenants is studied. Another class of buildings, belonging to large trading companies or private owners, are more closely packed, and the lower tenements are generally insufficiently lighted. It is obvious from looking at these buildings that the main consideration of the architect was not the comfort and welfare of the tenants, but the greatest number of apartments or rooms that could be built “to let on a given area.” But it may be said in favor of capital on a large scale that it can take advantage of sanitation.

¹ See Tables I and II.

TABLE I.—*Number of rooms occupied.*¹

	Class A.	Class B.	Class C.	Class D.	Class E.	Class F.	Fami- lies.	Per- sons.
One room occupied by—								
One person	7	98	40	54	32	2	233	233
Two persons	10	97	56	44	45	3	255	510
Three persons	4	42	30	26	17	.....	119	357
Four persons	2	47	29	19	6	.....	103	412
Five persons	2	34	20	14	1	.....	71	355
Six persons	7	51	8	12	2	.....	80	480
Two rooms occupied by—								
Two persons	1	21	47	82	83	4	238	476
Three persons	1	25	33	38	46	3	146	438
Four persons	2	31	41	50	38	.....	162	648
Five persons	2	36	38	39	37	6	158	790
Six persons	2	33	29	35	24	1	124	744
Seven persons	2	35	14	22	7	.....	80	560
Eight persons	1	30	8	15	2	.....	56	448
Three rooms occupied by—								
Three persons	2	7	14	18	37	19	97	291
Four persons	2	9	13	13	20	9	66	264
Five persons .....	.....	8	9	14	22	8	61	305
Six persons .....	.....	5	16	17	23	3	64	384
Seven persons	1	16	14	10	17	1	59	413
Eight persons	1	8	11	10	6	.....	36	288
Nine persons	1	16	3	6	1	.....	27	243
Four rooms and over occupied by—								
Four persons .....	.....	2	4	22	57	64	149	596
Five persons .....	.....	2	4	10	33	14	63	315
Six persons .....	.....	2	9	16	26	20	73	438
Seven persons .....	.....	4	5	13	15	8	45	315
Eight persons .....	.....	6	3	6	14	4	33	264
Nine persons .....	.....	.....	3	5	4	1	13	117
Ten persons .....	.....	3	2	7	6	.....	18	180
Persons in rooms not stated.....	25	288	200	302	214	1	.....	1,030
Population.....	219	3,057	2,233	2,867	2,755	763	.....	11,894

¹ Labor and Life of the People, by Charles Booth.

"In a few cases there were more than six persons in one room—as many as seven-eight, and even nine. On the other hand, the number of rooms occupied occasion, ally exceeded the number of persons in the family.

* The facts are best shown in the table which follows:

TABLE II.—*Share of room to each person.*¹

(1) Share of room to each person.	Class A.		Class B.		Class C.		Class D.		Class E.		Class F.		Total.	
	Num- bers.	Per cent.	Num- bers.	Per cent.	Num- bers.	Per cent.	Num- bers.	Per cent.	Num- bers.	Per cent.	Num- bers.	Per cent.	Num- bers.	Per cent.
(and less)...	42	21.6	306	11.1	48	2.4	72	2.8	12	0.5	.....	.....	480	4.4
1 or 2.....	10	5.2	170	6.1	100	4.9	70	2.7	5	0.2	.....	.....	355	3.2
or 3.....	16	8.2	428	15.4	180	8.9	196	7.7	40	1.6	.....	.....	860	7.9
4 or 5.....	14	7.2	245	8.8	98	4.8	154	6.0	49	1.9	.....	.....	560	5.2
6 or 7.....	33	17.0	468	16.9	291	14.3	342	13.3	204	8.0	6	0.8	1,344	12.4
8 or 9.....	8	4.2	64	2.3	88	4.3	80	3.1	48	1.9	.....	.....	288	2.7
or 10.....	10	5.2	210	7.6	210	10.3	265	10.3	245	9.7	30	3.9	970	8.9
11 or 12.....	7	3.6	112	4.1	98	4.8	70	2.7	119	4.7	7	0.9	413	3.8
13 or 14.....	.....	.....	.....	.....	27	1.3	45	1.8	36	1.4	9	1.2	117	1.1
Less than half a room.	140	72.2	2,003	72.3	1,140	56.0	1,294	50.4	758	29.9	52	6.8	5,387	49.6
1 2, 3, or 4.....	28	14.4	396	14.3	396	19.5	438	17.1	492	19.4	56	7.4	1,806	16.6
5 or 6.....	.....	.....	28	1.0	35	1.7	91	3.6	105	4.1	56	7.4	315	2.9
7 or 8.....	.....	.....	40	1.4	45	2.2	70	2.7	110	4.3	40	5.2	305	2.8
9 or 10.....	3	1.5	87	3.1	153	7.5	210	8.2	294	11.6	129	16.9	876	8.1
11 or 12.....	8	4.2	36	1.4	52	2.6	52	2.0	80	3.1	36	4.7	264	2.4
13 or 14.....	.....	.....	10	0.4	20	1.0	50	2.0	165	6.5	70	9.2	315	2.9
1 (and over).	15	7.7	169	6.1	192	9.5	360	14.0	537	21.1	323	42.4	1,596	14.7
Half a room or more...	54	27.8	766	27.7	893	44.0	1,271	49.6	1,783	70.1	710	93.2	5,477	50.4
Total	194	100	2,769	100	2,033	100	2,565	100	2,541	100	762	100	10,864	100
Not stated	25	.....	288	.....	200	.....	302	.....	214	.....	1	.....	1,030	.....
Total	219	.....	3,057	.....	2,233	.....	2,867	.....	2,755	.....	763	.....	11,894	.....

¹ Labor and Life of the People, by Charles Booth.

"It will be seen that, taking this sample as a whole, 5,000 individuals occupy less than half a room each and 5,000 occupy half a room or more. Of those who occupy less than half a room most live three in a room. Of those who are less closely packed the greatest proportion live two in a room, and next, following closely after, are those who occupy one room or more for each person.

"Taking class by class in the same way we find that the position of A and B is the same—three-fourths occupy less than half a room each and one-fourth half a room or more. In Class C rather more than half are in the first category, while in Class D it is almost exactly half and half. In Class E nearly three-fourths have not less than half a room each, while in Class F there are very few who have not this amount of space.

"It would be too rash to assume that what is here shown with regard to 10,000 people of Classes A to F would be true of the whole 3,500,000 of these classes, but there is nothing inherently improbable in the supposition."

There is a third class of buildings belonging to private unknown owners; the blocks are much smaller and most of them unsatisfactory. They often are owned by a small local builder, who constructs them as cheaply as possible. They have little light and are unsanitary. In general, it may be said that it is only in the worst blocks that the poor are accommodated. To supply suitable quarters on business principles is too dear for those on or below the line of poverty. To avoid these unsalutary dwellings is a problem of the future. Many of the poor prefer to live in the most unhealthy tenement house rather than to occupy the better buildings, because the rules and regulations are unendurable to those accustomed to unsanitary surroundings.

The advantages in living in buildings are greater than the drawbacks. Cheapness, a higher standard of cleanliness, and sanitation are attained. There is neighborly intercourse and especially the impossibility of being overlooked altogether or criminally neglected by relatives in illness or old age. Some of the disadvantages are a want of privacy and increased facility for gossip and quarrel, which, however, may give a variety of selfish and petty feeling as contrasted with the monotony of daily life.

INFLUX FROM RURAL DISTRICTS.

The influx from the country into London is mainly an economic movement, caused partly by the increased facilities of access and by higher wages. Much of the work can not be done by those reared in the city. The countrymen who come are largely the best of the youth, seeking economic advancement; they are more steady than city-bred youth, and in coming to London receive much more pay. Country or village life is too uneventful for young men, and in addition the current will flow in the direction of higher wages and more expensive living. The decay of apprenticeship has gone further in the large centers of population, where machinery and division of labor has had greater scope. A large majority of those who come to the city are between 15 and 25 years of age. London is kept up in bone and sinew by this country element, which in the second generation degenerates, showing a lower physical

tone. The third generation is still lower. The greater part of London poverty and distress is homemade. The excess of Londoners is chiefly in casual and irregular employments, which require no exceptional steadiness or strength.

WOMEN AND GIRLS.

The position of the married women can only be improved through education of the children, especially by moral and industrial training. The more intelligent and trustworthy the girl, the more easily can she be removed from one branch of work to another, and the less need there is that extra hands should be engaged by the employer.

Among the dock-laboring class are many girls with a low standard of comfort, whose wants are supplied by three days' wages in the week, and who have a natural dislike to steady and continuous work. The married women employed in factories seem to have been brutalized, and their influence over young girls in the factory is very much worse than when men and girls work together. Many of these girls think that externals must be kept up, for they regard them as essentials; this is one of their ideals for which they stint themselves. Probably every girl in the lowest classes in the East End has an opportunity to marry, and with few exceptions every girl does marry. This is not true of the middle classes. The girls are rough, boisterous, outspoken, warmhearted, and honest in their work; their standard of morality is low, but their very tolerance of evil, as is shown by their willingness to subscribe for a companion when in trouble, may be one reason why they have such a repugnance to the worst forms of immorality. Their great enemy is drink, for when they become dock laborers' wives it draws them down, and their children with them, for they are ignorant of every domestic accomplishment.

CONDITION OF SCHOOL CHILDREN.

The school fees under the London board are fixed according to the character of the population, varying from 1*d.* to 6*d.* per week; two only reach 9*d.* the limit by law. Twenty per cent of these fees can not be collected; 10 per cent of children are attending who are in want of food; some come without their breakfast, because parents do not prepare it; as a little boy said, his mother got drunk and could not get up to get it. Such children are very irregular in attendance; this makes many difficulties for the teacher and wastes the public money. In such schools the lowest class predominates; there are 22 such schools with 21,000 pupils. These children live in the poorest and dirtiest neighborhoods; they have no regular meals; fully a third occupy one room with their parents; their waking hours are divided between school and the street. In such neighborhoods saloons are sometimes as numerous as 1 to every 100 adults, patronized by those on the verge of pauperism. Wonderful order is a striking thing in

these schools; without harsh control the usually turbulent street urchins are trained to be industrious and quiet; the little fellows respond to right rule, which more than anything else gives ground for hope in regard to the future of these poor children. At home they have no training; they thus need to be encouraged and allowed to catch on to something that will lift them out of the slough into which they were born, and give them a taste for better things. The personal influence of the teachers here is valuable. When an infant is 3 years old it may be sent to an elementary school; at 5 the law requires it to attend; at 7 it ranks as a boy or girl. Children of the infant classes reflect the poverty of their homes less than those in upper departments. Besides keeping order the teaching of cleanliness and kindergarten is carried on. At 7 years the code requires that they shall be ready for examination for reading from books of more than one syllable, spelling, writing, arithmetic as far as addition and subtraction, and half the multiplication table. There is needle work for girls and drawing for boys. In the department above this poverty and neglect are more apparent; the children are dull and backward; many are failures from infancy, or are boys just run in from the streets, who may have never been in school before. Some of them make a start; they get cleaner, but this is the lowest circle; parents hurry their children off to work as soon as the law allows them.

The difficulty with the children is caused more frequently by poverty and shiftlessness at home than by neglect and vice, although there is a heavy tide of the latter as well. In one of the schools, having the worst classes, a teacher said that nearly one-fourth of the children have bad or drunken homes, two-thirds have their fees remitted, about the same number have free meals as often as the funds allow. A full fourth on the rolls is seldom in the school. Compulsion, in its ordinary form with such children, is practically powerless; to coach these up requires the more regular pupils to be neglected. It must be said, however, that the school work required by the code is neither attractive in itself to children nor does it commend itself to the parents as likely to serve a boy or girl much in the struggle for bread. The education is too abstract for slum boys. Cooking has been started in some of the schools; all are fond of it. The deepest and best instinct lying back of everything in the woman heart, the desire to make home comfortable, is reached and brought into play. Training in the domestic arts is the best thing that can be given to girls of this class, needful before all else if their standard of living is to be raised. Want of purpose is a prevailing feature in homes of the lower class; these parents seldom think of their children's future; the Jews are an exception; the encouragement to the children helps them in school. The penny bank is the best corrective to habits of self and heedless indulgence, which is the root of half the misery of the slums. This penny bank is a common part of the school machinery. Schools planted where the better-paid men

abound show a distinct advance and cost less per head (£2 14s. 4d.) than in the slum districts (£3 6s. 3d. per head). Nothing is more costly to the community than a slum child. Many of the poor, as soon as their children are through with school, put them on work which prepares them for nothing, so that they drift into casual employment, trust to chance for a living, marry at 20, and sink to a lower class. The needs of the children are traceable to three sources, poverty, neglect, and defects in the code. As to defects in the code at least 30,000 children of the lower classes need the trained habits of decency, cleanliness, and common self-respect, the rudiments of civilized, social, and domestic life. These 30,000 are the raw material out of which, to a large extent, the poverty, misery, vice, and crime of the next generation will come.

The slum child costs the community from £28 to £35 in its school stage.

The education of the code has been technical education of the wrong kind, fitting the children for competitive examinations, clerkships, and college work, and not for the workshop, engine room, the factory, and the home.

The proportion of pupils in the lowest grade¹ in poor condition is small considering the grade, but the number of dull or delicate children is one of the most discouraging facts in the tables. Taking the results of the table as a whole, the lowest class (A) is bad throughout; 28 per cent of the very poor (B) come to school well cared for, and 21 per cent attend irregularly.

¹ See Table III.

TABLE III.—Summary of selected lower-grade school.¹

Class.	Occupation of parents.	Particulars of Parents.										Particulars of children.																	
		Character of father.						Character of mother.				Attendance.		Condition.			Total.	Per cent.											
		Father and mother.	Father only.	Mother only.	Ill or delicate (either or both).	Out of work.	Wives work.	Good.	Fair.	Indifferent.	Bad.	Drink.	Good.	Fair.	Indifferent.	Bad.			Drink.	Regular.	Fair.	Irregular.	Meals given.	Cared for.	Fair.	Poor.	Dull or delicate.	Neglected.	
A	Coalheaver, laborer, organ-grinder, picture-frame maker, drover, hawker, etc.	26	.....	1	1	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B	Hawker, organ grinder, rag-sorter, plasterer, plumber, baker, seamstress, etc.	975	44	264	130	70	485	202	467	217	133	75	359	502	249	129	83	550	465	274	941	884	369	576	344	312	283	1,289	37.2
C	Laborer, painter, scavenger, bricklayer, stonemason, sailor, hatter, carman, etc.	838	42	226	43	31	331	284	450	153	48	45	323	381	152	63	55	460	323	174	508	419	360	451	146	197	133	957	27.6
D	Per cent. Laborer, green-grocer, carpenter, firemen, zinc worker, postman, porter, bricklayer, etc.	76.0	3.4	0.6	10.1	6.8	39.1	19.8	45.8	21.3	13.1	7.3	29.0	40.5	20.1	10.4	6.7	42.6	36.1	21.3	73.0	68.9	28.6	44.7	26.7	24.2	22.0	.....	.....
E	Per cent. Painter, laborer, cab-driver, saddler, boot-maker, gardener, foreman, porter, etc.	772	28	25	8	2	161	495	247	39	19	7	510	205	59	23	20	541	209	74	102	103	563	223	38	168	35	824	23.8
	Per cent.	92.9	4.4	2.7	4.5	3.3	36.0	30.2	48.2	16.4	5.2	4.8	35.2	41.5	16.5	6.8	5.9	48.1	133.7	18.2	55.1	43.8	37.6	47.1	15.3	20.6	14.0	.....	.....
F	Per cent. Saddler, shopkeeper, laundry, foreman, printer, carman, engineer, baker, etc.	334	8	2	9	....	46	259	65	11	7	3	247	58	16	15	12	243	74	20	26	17	266	61	16	61	20	343	9.9
	Per cent.	93.6	3.4	3.0	0.9	0.3	20.2	62.0	30.8	4.9	2.3	0.8	64.0	25.8	7.4	2.8	2.5	65.6	25.4	9.0	12.4	12.5	68.3	27.1	4.6	20.4	4.2	.....	.....
	Per cent.	21	.....	.....	1	.....	.....	17	.....	1	.....	.....	.....	.....	.....	.....	1	14	5	2	1	.....	18	2	1	3	1	21	0.7
	Per cent.	97.1	2.3	0.6	2.7	13.7	75.8	19.0	3.2	2.0	0.9	73.5	17.1	5.0	4.4	3.6	72.9	21.6	5.8	7.6	5.0	77.5	17.7	4.8	17.7	5.8	.....	.....

¹ Labor and Life of the People, by Charles Booth.

The improvement is very noticeable after the poor and very poor are left out. Attendance, condition, payment of fees, character of parents are all on the ascending scale.

SECONDARY EDUCATION—BOYS.

Under the existing conditions of industry the vast majority of children leave school at the age of 12 or 13. The greater majority of boys attending the secondary schools of London are of the middle and lower middle class.

The experience of junior scholarships open to penny schools shows that the offer of free education fails to procure the poor children with capacity, where the loss of a boy's earnings is a serious pinch to the family.

The question is not between a liberal and technical training, for any studies must directly or indirectly be *bread studies*. The unbroken tradition of purely literary training, which has been handed down in grammar schools from the middle ages, must come to an end, as far as the slums are concerned.

SECONDARY EDUCATION—GIRLS.

What is needed by girls in the working classes is not so much a ladder from the gutter to the university as instruction in practical domestic economy and the laws of health, and an acquaintance with good literature. By domestic economy is not meant a training necessary for domestic service. The majority of girls in East and South London will never be attracted to domestic service, and their home needs are of a very different order from those of the servant-keeping classes; the problem is to have the children after they have left school to come for an hour or two in the afternoon for lessons in cottage cookery, house-cleaning, methods of ventilation, washing and ironing, sick-nursing, adapted to the requirements of households living under primitive conditions. These children are only too precocious in a knowledge of all that is termed life. They know evil so well that in offering them knowledge we are but introducing them to the good and helping them to discern it. We need not fear to put into their hands or to give them the key to the works of the great novelists and essayists.

CONDITION OF LABORERS.

The multiplication of small masters is a case of economic disease in East London. Competition of the provincial factory causes two difficulties; it depresses London labor in its best form, that is, the well-managed manufactory, and when the trade declines the people stay and fall into the category of the unemployed or partially employed and provide the mass of cheap labor.

As to division of labor, the wholesale trade adopts it because it in-

creases the quantity rather than the quality. The model workman is one who never has to pause to think what he is doing, but works like a machine. Work at home, with aid of family, may succeed if the father is kind and not a drunkard. There are many who are willing to work, but, lacking energy, can neither obtain work nor keep it; and thus the habit of vagrancy develops. The vagabond becomes so content with his position in life as not to make efforts to improve. In all great cities there is a certain nomad population of habitual wanderers crowding philanthropic shelters who are to be distinguished from the poor and very poor.

From an investigation of 286 men, 60 were found to be of good character, 146 indifferent, and 80 doubtful or bad. The condition of the bad is mostly due to drink or gambling. Fifty claimed some profession or trade, 95 were skilled laborers, and 141 unskilled. A large proportion (116) were in the prime of life.

The nonindustrial and disorderly classes predominate in the common lodging houses; many belong to the very poor and poor classes; some, incapable mentally or physically, can not work, or their work is useless; these oscillate between the common lodging houses and the poor house. Love of drink is the prevailing passion and is very often due to unhappy surroundings.

Mr. Booth accepts Classes E and F, or the comfortable working classes, as representing the standard life in England, from which that of the classes above or below diverge by some happy or unhappy accident or owing to some cause which requires explanation. This standard life—the common lot of humanity—is continually endangered by insecurity, against which it is difficult to guard. One disease from which society suffers is the unrestricted competition in industry of the needy and helpless. Mr. Booth insists that, while it may seem impossible that the state nurse the helpless and incompetent, yet nothing less than this will enable self-respecting labor to obtain the full remuneration and the nation's standard of life be raised. The difficulty lies in inducing or driving these people to accept a regulated life. Mr. Booth's scheme is a limited form of socialism. By taking charge of the life of the incapable, state socialism may find its proper work. The individualistic system breaks down as things are. Its stern doctrine, however, would have better opportunity of success were the social organism purged of those who can not stand alone. State interference with a small fraction of the population might ultimately dispense with any socialistic interference in the lives of all the rest. These people should be allowed to live as families in industrial groups planted wherever land and building materials are cheap, being taken care of, taught, trained, and employed on government account. They should have little or no competition with the outside world, since their own lives have already shown their incapacity to maintain themselves in a free community, where competition is too strong, and instead of developing them, it crushes them

In Class B, or the very poor, 5 per cent of poverty is due to low wages and casual or irregular work. In Classes C and D, or the poor, irregularity of work causes the poverty of 43 per cent, and low pay 25 per cent. Drink accounts for 14 per cent of the poverty in the East End, as principal cause, but as contributing cause it would be connected with a much larger proportion. Deserving men may be idle in the streets, but those who descend low enough to ask charitable aid rarely stand the test of work, and when it is obtained they rarely keep it. Want of employment is not the real trouble. Those out of work are, as a class, "the selection of the unfit." To the rich the very poor are a sentimental interest; to the poor they are a crushing load. The poverty of the poor is due mainly to the competition with the very poor, who constitute the main difficulty in the social problem. All other classes could take care of themselves if the very poor were out of the way. The problem involves the separation of poverty from industry, and it seems that the attainment of the solution lies in the elimination of the very poor or those with casual earnings, a class industrially valueless and socially pernicious. It has been shown that its numbers are not so great but that it may be dealt with in some semisocialistic way, which will be for the interest of self-supporting labor. It is not expense that hinders, but the difficulty of devising any scheme which would not tend to increase the numbers to be dealt with.

Mr. Booth is unprepared to make very definite suggestions, for the circumstances of the very poor are as various as the remedies demanded.

Having now followed in brief the description of the slums and the difficulties of treating them, as given by Mr. Charles Booth, another scheme, which is the first proposed remedy on a large scale, may be considered.

GEN. BOOTH'S SCHEME.

It is but natural that the scheme of Gen. Booth has attracted more attention than the studies of Mr. Charles Booth. The public point of view is intensely practical, and sometimes extreme in thinking that the remedy is the only important question in every malady. Thus impatience is often manifested, when a detailed study of the nature and cause of a disease is made, before the question of its remedy receives attention. The shortsightedness of such a view is evident.

But the direct attempt to remove an evil, before its causes and nature have been fully investigated, has some advantages. One is that its very application, even if it fails, may reveal these causes.

General Booth's remedy is to be recommended for its directness and practicality. In addition, it does not rest on any sudden impulse, but is a result of steady growth, in which the life of one man has culminated. To understand the individuality that characterizes the movement, a few facts in the life of Gen. Booth will be in place.

Mr. William T. Stead¹ calls Gen. Booth the George Fox of the nineteenth century. Like Gen. Booth, Fox was a man of great spiritual genius and contagious enthusiasm. He illustrates the fact that "Reform is an indispensable adjunct to preaching the Gospel; the Salvation Army obeys the same law which concerted the turbulent and iconoclastic Quakers of Cromwell's time, into the cultured leaders in every beneficent project of humanitarian and philanthropic endeavor." The charges against Fox in the seventeenth century are similar to those made against Booth.

He was called ambitious, his motives were discredited, etc. Gen. Booth himself feels a close relation to John Wesley. Between the Quakers of the seventeenth, the Methodists of the eighteenth, and the Salvationists of the nineteenth century there is a line of direct succession. According to Gen. Booth the Salvation Army represents what Wesleyanism would have become had it continued to develop after Wesley's death. Wesley started the poor man's bank and the poor man's lawyer and the first medical dispensary for the poor in London. Gen. Booth, although baptized in the Church of England, became a member of the Methodist Church at the age of 15. From the age of 17 until 32 he was in the hands of the churches. The Wesleys desired to have Booth conform to the established order; he was made a local preacher, and did so well that they wanted him to go to college and become a regular minister. But not desiring to, he evaded a decision. As he could not allow his zeal to be limited by the regulations for local preachers, he resigned his position as lay preacher and began his work in open air, and for this was expelled from the Wesleyan Methodist Society. On advice he joined the Congregationalists and was recommended to apply for admission to an independent college in order to qualify for the Congregational ministry. But he could not accept their doctrine of a limited atonement, so he gave up this plan. He is subsequently found studying theology for the ministry of the Methodist new connection, one of the earliest offshoots from the Wesleyan Church. But it was difficult for the young student to follow the theological curriculum. He would go to revivals at any cost, and it was a serious consideration whether he should not be released from the institution; but the fruit of his zeal saved him, and he was finally ordained as a regular minister. At this time, curious to say, Mr. Booth shrank from the career of an evangelist. But being ordered to take charge of a mission, he did it, and his success was so great that he gave his life to work of this nature. By a fortunate marriage to one who was thoroughly in sympathy with him in such work, he found a help without which his present scheme could have hardly been realized. Mr. Booth and his wife conducted a mission at Cornwall, and there a revival began which was subsequently followed by the establishment of the Salvation Army. Hitherto Mr. Booth had preached in chapels and halls,

¹ General Booth, by W. T. Stead, London, 1891.

but at Cardiff he made a change and held services in a circus. Being invited to hold a mission in a large chapel, and not being able to get the crowd to come, he made what many would consider a last resort, and adopted the star-company method to attract the classes within the chapel. A number of the lowest roughs, criminals, prize-fighters, etc., who had been convicted of sin and reclaimed were enlisted and advertised as the "Hallelujah Band." This innovation caused the chapel to be filled; it was sufficient to draw other ex-convicts, wife-beaters, drunkards, and the like. It may be said, by way of parenthesis, that there would be no justification of such a spectacular method were it not for the fact that it has good effect upon the rough and degraded classes. While, doubtless, numbers of so-called converted reprobates fall back, yet some do not; and quite a number, though they fall again, are not so low as they were originally. Æsthetical criticism, both from the religious and irreligious, is often based on a misconception and a want of knowledge of the real nature of the slums.

The success of the "Hallelujah Band" indicated the method of reaching the most degraded. After a hard fight in Leeds, where they were pelted and mobbed, Mr. and Mrs. Booth came to London, and on invitation conducted services in a tent on Baker's Row, in Whitechapel. After the tent was blown down an old dancing-saloon was used, then a stable, but it was not until the Effingham Theater was taken that the work showed some prospect of permanence. The idea at first was to gain converts for the churches; but, converts not being welcomed by the churches, Mr. Booth became convinced that a permanent religious society was needed to take care of the converts, and here is the real beginning of the Salvation Army. But it was a dozen years before it became a distinctive and conspicuous movement, which was in 1878. The name "Salvation Army" was a happy one; it made the spirit of religion more effective through the practical methods of army regulations. The history of the Salvation Army from this time on shows a steady progress, notwithstanding persecution from almost every quarter, and at present it has assumed the form of a vast social and religious movement, as in the history of the church the striking of the fire has scattered the sparks.

PRINCIPLES UNDERLYING THE SCHEME.¹

In the words of Gen. Booth himself, the essentials to a successful scheme for the elevation of the degraded pauper classes are as follows:

1. The first essential that must be borne in mind as governing every scheme that may be put forward is that it must change the man when it is his character and conduct which constitute the reasons for his failure in the battle of life.

2. The remedy, to be effectual, must change the circumstances of the individual when they are the cause of his wretched condition and lie beyond his control.

3. Any remedy worthy of consideration must be on a scale commensurate with the evil with which it proposes to deal.

¹ In *Darkest England*, pp. 85-89.

4. The scheme must be permanent.
5. It must be immediately practicable.
6. The indirect features of the scheme must not be such as to produce injury to the persons whom we seek to benefit.
7. While assisting one class of the community, it must not seriously interfere with the interests of another.

THE SCHEME.

The insane, the criminals, and the indoor paupers are cared for in a way, but in addition to these there are those who live on the verge of despair, if not in degradation; they are the helpless and hopeless. The scheme of Gen. Booth is primarily for these classes, and "consists in the formation of these people into self-helping and self-sustaining communities, each being a kind of coöperative society or patriarchal family, governed and disciplined on the principles which have already proved so effective in the Salvation Army. These communities are divided into (1) the city colony, (2) the farm colony, and (3) the over-sea colony.

The city colony consists of harbors of refuge for the destitute, supplying their immediate necessities, furnishing temporary employment, giving hope for the future, and commencing a course of regeneration by moral and religious influences. Those who are found sincere, industrious, and honest are advanced to the farm colony, which consists of a settlement of the colonists on an estate in the provinces, in the culture of which they would find employment and obtain support. Here the process of reformation is to be carried on by the same industrial, moral, and religious methods as have been commenced in the city. Especial attention is given to those forms of labor and that knowledge of agriculture which would qualify the colonist for labor in some other land, should he fail to find employment in his own country. Coöperative farms might be provided; but the great majority, after trial and training, would be passed to the foreign settlement, which constitutes the over-sea colony.

It is generally agreed that in the English colonies in South Africa, Canada, and western Australia there are millions of acres of useful and cheap land. The plan of the over-sea colony is to secure a tract of land, prepare it for settlement, establish in it authority, govern it by laws, assist it in necessity, gradually develop it with a prepared people, and so create a home for the destitute.

"The lost, the outcast, and the disinherited in the world" are those for whom Gen. Booth's scheme is intended. This "submerged tenth" number about 3,000,000 souls in England. The church does not seem to have been able to reach the depths of vice and destitution; there is want of enthusiasm, and æsthetical considerations are no slight hindrance. Benevolent societies have accomplished much, but they are necessarily limited and do not seem to be adequate to cope with the deepest evils. In spite of all criticism, the Salvation Army scheme

supplies a felt and positive need in the social organism, which is shown by its growth. A few years ago it did not exist; it now has more than 9,000 officers and 3,000 centers in different parts of the world. The attention that it attracts in all classes is noteworthy. The controlling motive is avowedly religious. The words of the founder are: "I may at once say, that without the new hope, the new incentives to honest labor, and the new sense of brotherhood which come mainly if not solely to these classes by religious means, I should regard my whole scheme as little better than a dream." The one test of admission is willingness to work, the one condition of remaining is obedience to orders; "every individual is perfectly free to follow any religious convictions or opinions he or she may possess;" no one is compelled to attend Salvationist services; "a man may rise from the lowest social strata through every stage of its scheme to its highest point, and yet remain an atheist to the last."

That the scheme is respected by persons of all shades of opinion is illustrated by the fact that the Marquis of Queensberry, in forwarding a check of £100 to Gen. Booth, stated that he sent "this mite as a reverent agnostic to the common cause of humanity." Such, in brief, is a general idea of the scheme.

RESULTS OF THE SCHEME.

General Booth, on condition of the public furnishing him £1,000,000, or £100,000 in cash and £30,000 yearly, being the interest on £1,000,000 at 3 per cent, bound himself and the salvation army to abolish poverty in London. He soon received the £100,000 required. The account of the first year's work of the scheme, issued by the salvation army, shows for London the following: For men—eight shelters, 7 food depots, 3 poor man's metropolises (superior lodging houses), 1 labor bureau, 6 workshops and labor factories. For women—eight rescue homes, 1 help and inquiry department, 8 registry, 1 shelter and food depot, 1 lodging house, 1 bookbinding factory, 1 knitting factory, 1 laundry, and 21 slum officers' posts.

In the year 1889-'90 the trading operations of the army were carried on with the net profit for the year of £12,800, of which £10,365 was paid over to general funds of the army.

All sorts of the most suffering and degraded took advantage of the food depots; the farthing meals were especially beneficial to the children. There is no charity. The rescue homes record 1,300 girls.

The consolidation of the work has been given special attention during the year. Captain Nicol says that they are not believers in merely spasmodic effort, although they welcome "outbursts in soul-saving or anything else that tends to deliverance of mankind from misery and sin."

The following table shows the location and number of the corps and officers for the year 1889-'90:

The Salvation army field state, December, 1890.

Country.	Headquarters.	Corps.	Officers.
British Isles	London	1,364	4,624
France and Switzerland	Paris	109	389
Belgium	Brussels	4	26
Holland	Amsterdam	42	155
Germany	Berlin	22	75
Denmark	Copenhagen	36	103
Sweden	Stockholm	108	373
Norway	Christiania	47	142
Canada and Newfoundland	Toronto	313	1,056
United States, America	New York	381	1,135
Argentine Republic	Buenos Ayres	4	2
South Africa	Kimberley	54	165
St. Helena	Jamestown	1	2
India and Ceylon	Bombay	100	426
Australia	Melbourne	281	991
New Zealand	Christchurch	66	193
Finland	Helsingfors	5	21
Total .....	.....	2,937	9,896
Total for 1889 .....	.....	2,746	8,634
Increase .....	.....	191	1,262

The farm colony consists of three farms, making 1,150 acres of land, within 37 miles of London by road and 41 by the Thames, on which it partly borders. Buildings have been erected, and a large number of able-bodied poor have begun work.

While it will be some time before an impartial judgment as to the value and practicability of the scheme can be made, yet it may be said that the results thus far are not disappointing.

CHAPTER XIX.

NAME REGISTER.¹

I.—CHIEF STATE SCHOOL OFFICERS.

Name.	Address.	Official designation.
J. G. Harris.....	Montgomery, Ala.....	State superintendent of education.
Sheldon Jackson.....	Sitka, Alaska.....	General agent of education.
George W. Cheyney.....	Tombstone, Ariz.....	Superintendent of public instruction.
Josiah H. Shinn.....	Little Rock, Ark.....	State superintendent of public instruction.
J. W. Anderson.....	Sacramento, Cal.....	Do.
Nathan B. Coy.....	Denver, Colo.....	Do.
C. D. Hine.....	Hartford, Conn.....	Secretary of State board of education.
Robert J. Reynolds.....	Dover, Del.....	President of State board of education.
W. B. Powell.....	Washington, D. C.....	Superintendent of District schools.
A. J. Russell.....	Tallahassee, Fla.....	State superintendent of public instruction.
S. D. Bradwell.....	Atlanta, Ga.....	State school commissioner.
John E. Harroun.....	Boise City, Idaho.....	State Superintendent of public instruction.
Henry Raab.....	Springfield, Ill.....	State superintendent of public instruction.
H. D. Vories.....	Indianapolis, Ind.....	Do.
J. B. Knoepfler.....	Des Moines, Iowa.....	Do.
George W. Winans.....	Topeka, Kans.....	Do.
Ed. Porter Thompson..	Frankfort, Ky.....	Do.
A. D. Lafargue.....	Baton Rouge, La.....	State superintendent of education.
N. A. Luce.....	Augusta, Me.....	State superintendent of common schools.
E. B. Prettyman.....	Baltimore, Md.....	State superintendent of public instruction.
J. W. Dickinson.....	Boston, Mass.....	Secretary of State board of education.
Ferris S. Fitch.....	Lansing, Mich.....	State superintendent of public instruction.
D. L. Kiehle.....	St. Paul, Minn.....	Do.
J. R. Preston.....	Jackson, Miss.....	State superintendent of education.
L. E. Wolfe.....	Jefferson City, Mo.....	State superintendent of public schools.
John Gannon.....	Helena, Mont.....	State superintendent of public instruction.

¹ Including all changes reported to the Bureau up to October, 1892.

Chief State School Officers—Continued.

Name.	Address.	Official designation.
A. K. Goudy	Lincoln, Nebr	State superintendent of public instruction.
Orvis Ring	Carson City, Nev	Do.
J. W. Patterson	Concord, N. H.	Do.
A. B. Poland	Trenton, N. J.	Do.
Amado Chavez	Santa Fe, N. Mex.	Superintendent of public instruction.
James F. Crooker	Albany, N. Y.	State superintendent of public instruction.
S. M. Finger	Raleigh, N. C.	Do.
John Ogden	Bismarck, N. Dak.	State superintendent of public instruction.
O. T. Corson	Columbus, Ohio	State commissioner of common schools.
J. H. Parker	Guthrie, Ok.	Superintendent of public instruction.
E. B. McElroy	Salem, Oregon	State superintendent of public instruction.
D. J. Waller, jr	Harrisburg, Pa.	Do.
T. B. Stockwell	Providence, R. I.	Commissioner of public schools.
W. D. Mayfield	Columbia, S. C.	State superintendent of education.
Cortez Salmon	Pierre, S. Dak.	State superintendent of public instruction.
W. R. Garrett	Nashville, Tenn.	State superintendent of public schools.
J. M. Carlisle	Austin, Tex.	State superintendent of public instruction.
J. S. Boreman	Ogden, Utah	Commissioner of schools.
E. F. Palmer	Waterbury, Vt.	State superintendent of public instruction.
John E. Massey	Richmond, Va.	Do.
R. B. Bryan	Olympia, Wash.	State superintendent of public instruction.
B. S. Morgan	Charleston, W. Va.	State superintendent of free schools.
O. E. Wells	Madison, Wis.	State superintendent of public schools.
S. T. Farwell	Cheyenne, Wyo.	State superintendent of public instruction.

CITY SCHOOL SUPERINTENDENTS.

ALABAMA.

Anniston, M. H. Lane.¹
 Bessemer, A. M. Hendon.
 Birmingham, J. H. Phillips.
 Eufaula, William D. Jelks.
 Florence, J. W. Morgan, jr.
 Huntsville, A. W. Eshman.
 Mobile, E. R. Dickson.
 Montgomery, C. L. Floyd.
 Selma, Louis E. Jeffries.
 Tuscaloosa, Carleton Mitchell.

ARIZONA.

Tucson, W. W. Gillette.

ARKANSAS.

Fort Smith, J. L. Holloway.
 Helena, John Caldwell Davidson.
 Hot Springs, G. B. Cook.
 Little Rock, J. R. Rightsell.
 Pine Bluff, Ruth McBride.

CALIFORNIA.

Alameda, D. J. Sullivan.
 Berkeley, S. D. Waterman.
 Eureka, G. Warren.
 Fresno, T. L. Heaton.
 Los Angeles, W. M. Friesner.
 Napa City, J. L. Shearer.
 Oakland, J. W. McClymonds.
 Pasadena, James D. Graham.
 Riverside, Eli F. Brown.
 Sacramento, Albert Hart.
 San Bernardino, Alexander E. Frye.
 San Diego, Eugene De Burn.
 San Francisco, John Swett.
 San Jose, Frank P. Russell.
 Santa Barbara, George E. Knepper.
 Santa Cruz, D. C. Clark.²
 Santa Rosa, I. S. Crawford.
 Stockton, James A. Barr.
 Vallejo, L. G. Harrier.

COLORADO.

Aspen, W. T. Eddingfield.
 Colorado Springs, P. K. Pattison.

Denver, District No. 1, Aaron Gove; District No. 2, L. C. Greenlee; District No. 17, J. H. Van Sickle.
 Highlands, J. H. Van Sickle.
 Leadville, W. W. Watters.
 Pueblo, District No. 1, James S. McClung; District No. 20, P. W. Search.
 Trinidad, E. C. Stevens.

CONNECTICUT.

Ansonia, W. H. Angleton.
 Birmingham, Robert L. Gilbert.
 Bridgeport, Eugene Bouten.
 Bristol, James F. Williams.
 Danbury, J. M. Smith.
 Greenwich, George P. Fisher.
 Hartford, John H. Brocklesby.
 Manchester, Oliver B. Taylor.³
 Meriden, J. T. Pettee.
 Middletown, Walter B. Ferguson.
 New Britain, J. N. Bartlett.
 New Haven, Virgil G. Curtis.
 New London, Charles B. Jennings.⁴
 Norwalk, Charles Olmstead.³
 Norwich, N. L. Bishop.
 Rockville, I. M. Agard.²
 Stamford, Lewis R. Hurlbutt.³
 Thompsonville, E. H. Parkman.⁵
 Torrington, ———.
 Wallingford, T. J. Heavens.
 Waterbury, M. S. Crosby.
 Willimantic, F. H. Beede.⁵
 Winsted, Walter G. Mitchell.²

DELAWARE.

New Castle, D. B. Jones.
 Wilmington, David W. Harlan.

DISTRICT OF COLUMBIA.

Washington, William B. Powell, superintendent of public schools; G. F. T. Cook, superintendent of colored schools.

FLORIDA.

Jacksonville, Joel D. Mead.⁶
 Key West, C. F. Kemp.⁶
 Pensacola, N. B. Cook.⁶

¹ County superintendent; post-office, Jacksonville.

² Principal.

³ Secretary of the Board of School Visitors.

⁴ Acting school visitor.

⁵ Principal of the high school.

⁶ County superintendent.

St. Augustine, Peter Arnow.¹
Tampa, L. W. Buchholz.¹

GEORGIA.

Albany, ———.
Americus, William Harper.
Athens, G. G. Bond.
Atlanta, W. F. Slaton.
Augusta, Lawton B. Evans.
Brunswick, A. I. Branham.
Columbus, W. H. Woodall.
Griffin, Bothwell Graham.
Macon, B. M. Zettler.
Rome, B. Neely.
Savannah, W. H. Baker.
Thomasville, K. T. MacLean.¹

ILLINOIS.

Alton, Robert A. Haight.
Aurora, District No. 5., J. H. Freeman.
Austin, N. D. Gilbert.
Beardstown, M. Moore.
Belleville, H. D. Updike.
Bloomington, Miss Sarah E. Raymond.²
Braidwood, F. M. Muhlig.
Cairo, T. C. Clendenen.
Canton, C. M. Bardwell.
Centralia, H. B. Farmer.
Champaign, Robert L. Barton.
Charleston, J. W. Henninger.
Chicago, Albert G. Lane.
Danville, O. E. Latham.³
Decatur, E. A. Gastman.
Dixon, W. H. Williamson.
Duquoin, J. E. Wooters.
East St. Louis, James P. Slade.
Elgin, H. F. Derr.
Evanston, Homer H. Kingsley.
Freeport, R. W. Burton.
Galena, J. A. Williams.
Galesburg, William L. Steele.
Jacksonville, John R. Long.
Joliet, D. H. Darling.
Kankakee, F. N. Tracy.
Kewanee, E. C. Rosseter.
LaSalle, L. A. Thomas.
Lincoln, Ambrose M. Miller.
Litchfield, W. F. Bromfield.
Macomb, John McClenahan.
Mattoon, B. F. Armitage.
Moline, H. M. Slauson.
Monmouth, James C. Burns.

Oak Park, B. L. Dodge.
Ottawa, D. R. A. Thorp.
Pana, L. S. Ham.
Paris, Alfred Harvey.
Pekin, F. W. Reubelt.
Peoria, Newton Charles Dougherty.
Pera, Fred W. Smedley.
Quincy, T. W. Macfall.
Rock Island, S. S. Kemble.
Rockford, P. R. Walker.
Springfield, J. H. Collins.
Sterling, District No. 3., Alfred Bayliss.
Streator, B. B. Lakin.
Waukegan, W. E. Toll.

INDIANA.

Anderson, John W. Carr.
Bloomington, C. M. Carpenter.
Brazil, John C. Gregg.
Columbus, J. A. Carnagey.
Connersville, W. F. L. Sanders.
Crawfordsville, Isaac M. Wellington.
Elkhart, D. W. Thomas.
Evansville, J. W. Layne.
Fort Wayne, John S. Irwin.
Frankfort, B. F. Moore.
Goshen, William H. Sims.
Greencastle, Robert A. Ogg.
Hammond, W. C. Belman.
Huntington, Robert I. Hamilton.
Indianapolis, L. H. Jones.
Jeffersonville, P. P. Stultz.
Kokomo, Sheridan Cox.
Lafayette, Edward Ayres.
Laporte, W. N. Hailmann.
Lawrenceburg, W. H. Rucker.
Logansport, Albert H. Douglass.
Madison, D. M. Geeting.
Marion, W. D. Weaver.
Michigan City, James C. Black.
Mount Vernon, H. P. Leavenworth.
Muncie, W. R. Snyder.
New Albany, J. B. Starr.
Peru, W. J. Stratford.
Richmond, Justin N. Study.
Seymour, William S. Wood.
Shelbyville, J. C. Eagle.
South Bend, Calvin Moon.
Terre Haute, William H. Wiley.
Valparaiso, William H. Banta.
Vincennes, Albert E. Humke.
Wabash, M. W. Harrison.
Washington, William F. Hoffman.

¹ County superintendent.² Resigned; name of successor not reported.

IOWA.

Atlantic, G. W. Samson.
 Boone, George I. Miller.
 Burlington, Robert McCay.
 Cedar Rapids, J. F. Merrill.
 Clinton, O. P. Bostwick.
 Council Bluffs, Hugh W. Sawyer.
 Creston, H. B. Larrabee.
 Davenport, J. B. Young.
 Des Moines, East side, Amos Hiatt; West
 side, F. B. Cooper; North side, O. E.
 Smith.
 Dubuque, Thomas Hardie.¹
 Fort Dodge, F. C. Wildes.
 Fort Madison, C. H. Dye.
 Iowa City, W. T. Jackson.
 Keokuk, W. W. Jamieson.
 Le Mars, E. N. Coleman.
 Lyons, H. E. Robbins.
 Marshalltown, C. P. Rogers.
 Mason City, William Wilcox.
 Muscatine, F. M. Witter.
 Oskaloosa, Orion C. Scott.
 Ottumwa, A. W. Stuart.
 Sioux City, H. E. Kratz.
 Waterloo, East side, F. J. Sessions; West
 side, G. A. Bateman.

KANSAS.

Argentine, H. A. Hollister.
 Arkansas City, D. R. Boyd.²
 Atchison, J. H. Glotfelter.
 Emporia, William Reece.
 Fort Scott, Guy P. Benton.
 Hutchinson, H. C. Minnick.
 Junction City, S. V. Mallory.
 Kansas City, Arvin S. Olin.
 Lawrence, Edward Stanley.
 Leavenworth, James E. Klock.
 Newton, J. W. Cooper.
 Ottawa, Frank P. Smith.
 Parsons, H. C. Ford.
 Pittsburg, C. M. Light.
 Salina, C. Y. Roop.
 Topeka, William M. Davidson.
 Wellington, John A. McClain.
 Wichita, R. W. Stevenson.
 Winfield, J. W. Spindler.

KENTUCKY.

Ashland, John G. Crabbe.
 Bowling Green, W. B. Wylie.

Covington, John W. Hall.
 Dayton, R. M. Mitchell.
 Frankfort, McHenry Rhoades.
 Henderson, Edward S. Clark.
 Hopkinsville, Charles H. Dietrich.
 Lexington, M. A. Cassidy.
 Louisville, George H. Tingley, jr.
 Maysville, J. H. Kappes.
 Newport, John Burke.
 Owensboro, James McGinniss.
 Paducah, George O. McBroom.
 Paris, Clarence L. Martin.
 Richmond, George W. Pickels.
 Winchester, C. E. Lyddane.³

LOUISIANA.

Baton Rouge, Fred. J. Tunnard.⁴
 New Orleans, Warren Easton.
 Shreveport, H. H. Hargrove.⁴

MAINE.

Auburn, W. W. Stetson.
 Augusta, J. O. Webster.⁵
 Bangor, Miss Mary S. Snow.
 Bath, J. C. Phillips.
 Belfast, A. I. Brown.
 Biddeford, Royal E. Gould.
 Brewer, George Curtis.
 Calais, A. J. Padelford.
 Ellsworth, R. M. Peck.
 Gardiner, O. B. Clason.⁶
 Lewiston, Giles A. Stuart.
 Portland, Orlando M. Lord.
 Rockland, Fred. C. Russell.
 Saco, Walter T. Goodale.
 Waterville, Lincoln Owen.⁷

MARYLAND.

Annapolis, John C. Bannon.⁸
 Baltimore, Henry A. Wise.
 Cambridge, James L. Bryan.⁸
 Cumberland, H. G. Weimer.⁸
 Frederick, Ephraim L. Boblitz.⁸
 Hagerstown, P. A. Witmer.⁸

MASSACHUSETTS.

Adams, Walter P. Beckwith.
 Amesbury, Frank Savage.⁶
 Attleboro, J. O. Tiffany.
 Beverly, William H. Lovett.¹
 Boston, Edwin P. Seaver.

¹ Secretary of the board of education.² Resigned; name of successor not reported.³ County superintendent.⁴ Parish superintendent.⁵ Secretary of the board of school visitors.⁶ Chairman of the school board.⁷ Principal of the high school.⁸ County school examiner.

Brockton, B. B. Russell.
 Brookline, S. T. Dutton.
 Cambridge, Francis Cogswell.
 Chelsea, Eben H. Davis.
 Chicopee, R. H. Perkins.
 Clinton, Charles L. Hunt.
 Danvers, A. P. Learoyd.
 Dedham, Oscar S. Williams.
 Everett, R. J. Condon.
 Fall River, William Connell.
 Fitchburg, Joseph G. Edgerley.
 Framingham, O. W. Collins.
 Gardner, Justus Dartt.
 Gloucester, Freeman Putney.
 Haverhill, Albert L. Bartlett.
 Holyoke, Edwin L. Kirtland.
 Hyde Park, Richard M. Johnson.¹
 Lawrence, W. C. Bates.
 Lowell, Arthur K. Whitecomb.
 Lynn, Orsamus B. Bruce.
 Malden, Charles A. Daniels.
 Marblehead, John B. Gifford.
 Marlboro, Henry Rupp Roth.
 Medford, Ephraim Hunt.
 Melrose, Guy C. Channell.
 Milford, S. F. Blodgett.
 Natick, I. Freeman Hall.
 New Bedford, William E. Hatch.
 Newburyport, William P. Lunt.
 Newton, George I. Aldrich.²
 North Adams, Anson D. Miner.
 Northampton, Alvin F. Pease.
 Peabody, Thomas Carroll.³
 Pittsfield, A. M. Edwards.
 Plymouth, Charles Burton.
 Quincy, H. W. Lull.
 Salem, William A. Mowry.
 Somerville, Clarence E. Meleney.
 Southbridge, John T. Clarke.
 Spencer, Wyman C. Fickett.
 Springfield, Thomas M. Balliet.
 Stoneham, Sarah A. Lynde.¹
 Taunton, C. F. Boyden.
 Waltham, Henry Whittemore.
 Watertown, George R. Dwelley.
 Westfield, G. H. Danforth.
 Weymouth, I. M. Norcross.
 Woburn, F. B. Richardson.
 Worcester, Albert P. Marble.

MICHIGAN.

Adrian, George W. Walker.
 Alpena, L. S. Norton.

Ann Arbor, Walter S. Perry.
 Au Sable, W. A. Morse.
 Battle Creek, F. W. Arbury.
 Bay City, J. W. Smith.
 Big Rapids, James R. Miller.
 Cadillac, E. P. Chureh.
 Cheboygan, William C. Thompson.
 Coldwater, H. M. Slauson.²
 Detroit, W. E. Robinson.
 Escanaba, O. R. Hardy.
 Flint, G. M. Fisk.
 Grand Haven, Egbert L. Briggs.
 Grand Rapids, W. W. Chalmers.
 Ionia, C. L. Bemis.
 Iron Mountain, E. F. Abernethy.
 Ironwood, L. L. Wright.
 Ishpeming, Harlow Oleott.
 Jackson, Dist. No. 1, T. L. Evans, Dist.
 No. 17, Charles O. Hoyt.
 Kalamazoo, O. E. Latham.
 Lansing, Walter H. Cheever.
 Ludington, H. C. King.
 Manistee, Albert Jennings.
 Marquette, Anna M. Chandler.
 Menominee, Jesse Hubbard.
 Monroe, W. H. Honey.
 Mount Clemens, J. D. Lee.
 Muskegon, David Maekenzie.
 Negaunee, F. D. Davis.
 Niles, J. D. Schiller.
 Owosso, J. W. Simmons.
 Pontiac, F. E. Converse.
 Port Huron, John A. Stewart.
 Saginaw, East side, A. S. Whitney; West
 side, Edwin C. Thompson.
 Sault Ste. Marie, A. Jay Murray.
 Traverse City, Charles T. Grawn.
 West Bay City, J. E. Lemon.
 Ypsilanti, M. A. Whitney.

MINNESOTA.

Anoka, M. A. Stone.
 Brainerd, Edwin K. Cheadle.
 Duluth, Robert E. Denfeld.
 Faribault, F. D. Budlong.
 Mankato, A. F. Bechdolt.
 Minneapolis, C. M. Jordan.
 Red Wing, Charles Dolan.
 Rochester, Edward G. Adams.
 St. Cloud, S. S. Parr.
 St. Paul, Charles B. Gilbert.
 Stillwater, Frank T. Wilson.
 Winona, Buel T. Davis.

¹ Secretary of the school committee.² Resigned; name of successor not reported.³ Chairman of the school committee.

MISSISSIPPI.

Columbus, J. M. Barrow.
 Greenville, E. E. Bass.
 Jackson, J. C. Brooks.
 Meridian, Andrew A. Kincannon.
 Natchez, I. W. Henderson.
 Vicksburg, Edmund W. Wright.

MISSOURI.

Boonville, F. W. Ploger.
 Brookfield, W. H. Brownlee.¹
 Cape Girardeau, T. E. Joyce.
 Carthage, J. M. White.
 Chillicothe, W. W. Griffith.
 Clinton, Charles B. Reynolds.
 Columbia, James S. Stokes.
 Fulton, John P. Goss.
 Hannibal, Livingston McCartney.
 Independence, William F. Bahlmann.
 Jefferson City, J. U. White.
 Joplin, R. D. Shannon.
 Kansas City, J. M. Greenwood.
 Lexington, H. D. Demand.
 Louisiana, R. B. D. Simonson.
 Marshall, R. H. Emberson.
 Maryville, E. J. H. Beard.
 Mexico, W. T. Carrington.
 Moberly, W. E. Coleman.
 Nevada, W. J. Hawkins.
 Rich Hill, J. C. Ryan.
 St. Charles, George W. Jones.
 St. Joseph, Edward B. Neely.
 St. Louis, Edward H. Long.
 Sedalia, A. J. Smith.
 Springfield, Jonathan Fairbanks.
 Trenton, Jason L. Rippetoe.
 Warrensburg, F. E. Holiday.
 Webb City, W. J. Stevens.

MONTANA.

Butte City, J. A. Riley.
 Helena, R. G. Young.

NEBRASKA.

Beatrice, C. G. Pearse.
 Fremont, Daniel Miller.
 Grand Island, Robert J. Barr.
 Hastings, Edwin N. Brown.
 Kearney, Jesse T. Morey.

Lincoln, Frank Strong.
 Nebraska City, W. H. Gardner.
 Omaha, Frank A. Fitzpatrick.
 Plattsmouth, F. C. McClelland.
 South Omaha, A. A. Munroe.

NEVADA.

Virginia City, D. E. Mack.

NEW HAMPSHIRE.

Concord, Louis J. Rundlett.
 Dover, Channing Folsom.
 Keene, Charles H. Douglas.
 Manchester, William E. Buck.
 Nashua, Fred Gowling.
 Portsmouth, J. C. Simpson.
 Rochester, Charles W. Brown.

NEW JERSEY.

Atlantic City, C. J. Adams.
 Bayonne, Charles M. Davis.
 Bordentown, William Macfarland.²
 Bridgeton, William Edward Cox.
 Burlington, Wilbur Watts.²
 Camden, Martin V. Bergen.
 Elizabeth, J. Augustus Dix.
 Gloucester City, J. C. Stinson.
 Hackensack, John Terhune.³
 Harrison, John Dwyer.²
 Hoboken, David E. Rue.
 Jersey City, Henry Snyder.
 Lambertville, George Pierson.
 Long Branch, C. Gregory.
 Millville, E. C. Stokes.
 Morristown, W. L. R. Haven.
 New Brunswick, George G. Ryan.
 Newark, William N. Barringer.
 Orange, Usher W. Cutts.
 Passaic, H. H. Hutton.
 Paterson, J. H. Reinhart.
 Perth Amboy, C. C. Hommann.
 Phillipsburg, H. Budd Howell.
 Plainfield, Henry M. Maxson.
 Rahway, Elihu B. Silvers.
 Red Bank, Samuel Lockwood.⁴
 Salem, Robert Gwynne, jr.
 South Amboy, W. L. Heinekin.
 Trenton, B. C. Gregory.⁵
 Union,⁶ G. C. Houghton.³

¹Secretary of the school board.

²Principal.

³County superintendent.

⁴County superintendent; post-office, Freehold.

⁵Supervising principal.

⁶Post-office, Weehawken.

NEW MEXICO.

Santa Fe, John P. Victory.

NEW YORK.

Albany, Charles W. Cole.
 Albion, Freeman A. Greene.
 Amsterdam, J. W. Kimball, John G. Ser-
 viss.
 Auburn, Benjamin B. Snow.
 Batavia, John Kennedy.
 Binghamton, Marcus W. Scott.
 Brooklyn, William H. Maxwell.
 Buffalo, William H. Love.
 Canandaigua, Henry L. Taylor.
 Catskill, Henry B. Coons.
 Cohoes, George E. Dixon.
 College Point, Mary L. Lyles.¹
 Corning, Leigh R. Hunt.
 Cortland, Frank Place.
 Dunkirk, J. W. Babcock.
 Edgewater,² J. J. Kenney.³
 Elmira, E. J. Beardsley.
 Flushing, E. H. Cook.
 Fulton, B. G. Clapp.¹
 Geneva, William H. Truesdale.
 Glens Falls, Sherman Williams.
 Gloversville, James A. Estee.
 Green Bush, H. R. Jolley.
 Green Island, James Heatly.
 Haverstraw, L. O. Markham.¹
 Hempstead, Albert C. Almy.
 Hoosick Falls, John E. Shull.¹
 Hornellsville, W. R. Prentice.
 Hudson, William S. Hallenbeck.
 Ilion, Judson I. Wood.
 Ithaca, Luther C. Foster.
 Jamaica, William J. Ballard.¹
 Jamestown, Rovillus R. Rogers.
 Johnstown, William S. Snyder.
 Kingston, Charles M. Ryon.⁴
 Lansingburgh, George F. Sawyer.
 Little Falls, Thomas Caswell.
 Lockport, Emmet Belknap.
 Long Island City, Sheldon J. Pardee.
 Lyons, W. H. Kinney.
 Malone, Sarah L. Perry.
 Matteawan, Walter S. Allen.¹
 Medina, Henry Pease.
 Middletown, James F. Tuthill.
 Mount Vernon, Charles E. Nichols.

New Brighton, J. J. Kenney.⁵
 New Rochelle, Isaac E. Young.
 New York, John Jasper.
 Newburg, R. V. K. Montfort.
 Niagara Falls, N. L. Benham.
 North Tonawanda, Clinton S. Marsh.
 Norwich, Elbert W. Griffith.
 Nyack, Ira H. Lawton.
 Ogdensburg, Barney Whitney.
 Olean, Fox Holden.
 Oneida, F. W. Jennings.¹
 Oneonta, Nathaniel N. Bull.
 Oswego, E. J. Hamilton.
 Owego, Edwin P. Recordon.
 Peekskill: Drum Hill district, John Mil-
 lar; Oakside district, A. D. Dunbar.
 Penn Yan, F. T. Schultz.
 Plattsburg, George J. McAndrew.
 Port Chester, John C. Rockwell.
 Port Jervis, John M. Dolph.
 Port Richmond, Orry H. Hoag.
 Poughkeepsie, Edward Burgess.
 Rochester, Milton Noyes.
 Rome, M. J. Michael.
 Saratoga Springs, Thomas R. Kneil.
 Saugerties, Frederick T. Russell.⁶
 Schenectady, S. B. Howe.
 Seneca Falls, F. S. Porter.
 Sing Sing, J. Irving Gorton.
 Suspension Bridge, R. H. Coe.¹
 Syracuse, A. B. Blodgett.
 Tonawanda, Henry Pease.¹
 Troy, Edwin E. Ashley.
 Utica, George Griffith.
 Waterloo, F. C. Wilber.¹
 Watertown, F. D. Shaver.
 Waverly, P. M. Hull.¹
 West Troy, James R. Main.⁵
 White Plains, Charles A. Genung.¹
 Whitehall, W. W. Howe.
 Yonkers, Charles E. Gorton.

NORTH CAROLINA.

Asheville, Philander P. Claxton.
 Charlotte, Alexander Graham.
 Concord, James P. Cook.¹
 Durham, Edwin W. Kennedy.
 Fayetteville, B. C. McIver.
 Goldsboro, J. Y. Joyner.
 Henderson, L. R. Crocker.⁸
 Newberne, John S. Long.

¹ Principal.

² Post-office, Stapleton.

³ School commissioner; post-office, New Brighton.

⁴ Superintendent of the "Kingston school dis-
 trict," which does not include the entire city.

⁵ School commissioner.

⁶ Chairman of the board of school trustees.

⁷ County superintendent.

⁸ County superintendent; post-office, Middle-
 burg.

Raleigh, Edward P. Moses.
Salisbury, R. G. Kizer.
Wilmington, M. C. S. Noble.
Winston, John J. Blair.

NORTH DAKOTA.

Fargo, Darius Steward.
Grand Forks, C. H. Clemmer.

OHIO.

Akron, Elias Fraunfelter.
Alliance, John E. Morris.
Ashtabula, J. S. Lowe.
Avondale, A. B. Johnson.
Bellaire, Benjamin T. Jones.
Bellevue, Henry Whitworth.
Brooklyn, H. L. Peck.
Bucyrus, F. M. Hamilton.
Cambridge, A. B. Hall.¹
Canton, James J. Burns.
Chillicothe, E. S. Cox.
Cincinnati, William H. Morgan.
Circleville, M. H. Lewis.
Cleveland, A. S. Draper.
Columbus, J. A. Shewan.
Dayton, W. J. White.
Defiance, C. W. Butler.
Delaware, D. E. Cowgill.
Delphos, E. W. Hastings.
East Liverpool, Alfred E. Gladding.
Elyria, Henry M. Parker.
Findlay, J. W. Zeller.
Fostoria, H. L. Frank.
Fremont, W. W. Ross.
Galion, A. W. Lewis.
Gallipolis, J. B. Mohler.
Greenville, F. Gillum Cromer.
Hamilton, C. C. Miller.
Ironton, William R. Comings.
Jackson, J. E. Kinnison.
Kenton, E. P. Dean.
Lancaster, Elijah Burgess.
Lima, J. M. Greenslade.
Lorain, F. D. Ward.
Mansfield, John Simpson.
Marietta, W. W. Boyd.
Mariou, Arthur Powell.
Martins Ferry, J. E. Mannix.
Massillon, E. A. Jones.
Middletown, B. B. Harlan.
Mount Vernon, Lewis D. Bonebrake.
Nelsonville, Fletcher S. Coultrap.
New Philadelphia, Charles Hauptert.

Newark, J. C. Hartzler.
Niles, F. J. Roller.
Norwalk, A. D. Beechy.
Oberlin, George W. Waite.
Painesville, George W. Ready.
Piqua, C. W. Bennett.
Pomeroy, Morris Bowers.
Portsmouth, Thomas Vickers.
Salem, M. E. Hard.
Sandusky, E. J. Shives.
Sidney, M. A. Yarnell.
Springfield, W. H. Weir.
Steubenville, Henry Ney Mertz.
Tiffin, J. H. Snyder.
Toledo, Harvey W. Compton.
Troy, C. L. Van Cleve.
Urbana, W. McK. Vance.
Van Wert, W. H. Lilly.
Warren, R. S. Thomas.
Washington C. H., N. H. Chaney.
Wellston, Timothy S. Hogan.
Wellsville, J. L. MacDonald.
West Cleveland, C. V. McGinnis.
Wooster, W. S. Eversole.⁴
Xenia, Edwin B. Cox.
Youngstown, F. Trendley.
Zanesville, W. D. Lash.

OKLAHOMA.

Oklahoma, —.

OREGON.

Astoria, R. N. Wright.
East Portland, J. H. Ackerman.
Portland, I. W. Pratt.
Salem, Mrs. Sarella G. Grubbe.

PENNSYLVANIA.

Allegheny, John Morrow.
Allentown, L. B. Landis.
Altoona, D. S. Keith.
Archbald, R. N. Davis.
Ashland, William C. Estler.
Beaver Falls, J. M. Reed.
Bethlehem, Thomas Farquhar.
Bloomsburg, L. P. Sterner.²
Braddock, Samuel Hamilton.³
Bradford, C. D. Bogart.
Bristol, Matilda S. Booz.
Butler, Ebenezer Mackey.
Carbondale, John J. Forbes.
Carlisle, C. P. Humrich.³
Chambersburg, William H. Hockenberry.
Chester, Charles F. Foster.

¹Principal of the high school.

²Principal.

³Secretary of the school board.

⁴Resigned; name of successor not reported.

Columbia, S. H. Hoffman.
 Connellsville, John S. Church.
 Conshohocken, David H. Ross.¹
 Corry, A. D. Colegrove.
 Danville, W. D. Steinbach.
 Du Bois, Zac. T. Meixell.²
 Dunmore, L. R. Fowler.
 Easton, William W. Cottingham.
 Erie, H. C. Missimer.
 Franklin, N. P. Kinsley.
 Greensburgh, J. Rush.²
 Harrisburg, Lemuel O. Foose.
 Hazelton, David A. Harman.
 Homestead, J. C. Kendall.²
 Huntingdon, Lewis S. Shimmell.
 Johnstown, T. B. Johnston.
 Lancaster, R. K. Buehrle.
 Lansford, A. S. Beisel.²
 Lebanon, Cyrus Boger.
 Lock Haven, John A. Robb.
 McKeesport, Perry A. Shanor.
 Mahanoy City, Frank Seward Miller.
 Manch Chunk, James J. Bevan.
 Meadville, Henry V. Hotchkiss.
 Middletown, H. H. Weber.
 Milton, S. O. Goho.
 Monongahela City, E. W. Dalby.²
 Mount Carmel, Samuel H. Dean.
 Nanticoke, Clarence B. Miller.
 New Brighton, J. Burdette Richey.
 New Castle, Frank M. Bullock.
 Norristown, Joseph K. Gotwals.
 Oil City, C. A. Babcock.
 Olyphant, M. W. Cumming.
 Philadelphia, Edward Brooks.
 Phoenixville, Harry F. Leister.
 Pittsburg, George J. Luckey.
 Pittston, Robert Shiel.³
 Plymouth, Irving A. Heikes.⁴
 Pottstown, William W. Rupert.
 Pottsville, B. F. Patterson.
 Reading, Samuel A. Baer.
 Renovo, D. M. Brungard.
 Scranton, George W. Phillips.
 Shamokin, William F. Harpel.
 Sharon, J. W. Canon.
 Sharpsburg, E. B. McRoberts.
 Shenandoah, L. A. Freeman.
 South Bethlehem, Owen R. Wilt.
 South Chester,⁴ A. G. C. Smith.⁵
 South Easton,⁶ Samuel E. Shull.

Steelton, L. E. McGinnes.
 Sunbury, C. D. Oberdorf.²
 Tamaqua, Robert T. Ditchburn.
 Tarentum, B. S. Hunnell.
 Titusville, R. M. Streeter.
 Towanda, Minor Terry.²
 Tyrone, B. F. Pinkerton.
 Uniontown, Lee Smith.
 Warren, W. L. MacGowan.
 Washington, A. G. Braden.
 West Chester, Addison Jones.
 Wilkesbarre, James M. Coughlin.
 Wilksburg, J. D. Anderson.
 Williamsport, Samuel Transeau.
 York, Atreus Wanner.

RHODE ISLAND.

Bristol, J. P. Reynolds.
 Central Falls, Asa H. Nickerson.
 East Providence, J. E. C. Farnham.
 Newport, Benjamin Baker.
 Olneyville, ——— Wright.
 Pawtucket, Gilman C. Fisher.
 Providence, Horace S. Tarbell.
 Westerly, Charles H. Babcock.
 Woonsocket, F. E. McFee.

SOUTH CAROLINA.

Charleston, Henry P. Archer.
 Columbia, D. B. Johnson.
 Greenville, William S. Morrison.
 Spartanburg, P. T. Brodie.

SOUTH DAKOTA.

Sioux Falls, A. M. Rowe.

TENNESSEE.

Chattanooga, H. D. Wyatt.
 Clarksville, J. W. Graham.
 Columbia, C. M. Charles.
 Jackson, Thomas H. Paine.
 Johnson City, R. H. Freeland.
 Knoxville, Albert Ruth.
 Memphis, Charles H. Collier.
 Nashville, Z. H. Brown.

TEXAS.

Austin, John B. Winn.
 Brenham, W. H. Flynn.
 Brownsville, J. F. Cummings.

¹ Resigned; name of successor not reported.

² Principal.

³ Supervising principal.

⁴ Post-office, Chester.

⁵ County superintendent; post-office, Media.

⁶ Post-office, Easton.

Corpus Christi, Charles W. Crossley.
 Corsicana, E. M. Faust.
 Dallas, T. G. Harris.
 Denison, N. Somerville.
 El Paso, W. H. Savage.
 Fort Worth, P. M. White.
 Gainesville, E. F. Comegys.
 Galveston, Oscar H. Cooper.
 Greenville, J. H. Van Amburgh.
 Houston, W. S. Sutton.
 Laredo, F. A. Parker.
 Marshall, Chesley F. Adams.
 Palestine, E. M. Pace.
 Paris, D. R. Cully.
 San Antonio, J. E. Smith.
 Sherman, W. Leonard Lemmon.
 Temple, W. T. Hamner.
 Tyler, P. V. Pennybacker.
 Waco, Mrs. Willie D. House.

UTAH.

Logan, E. W. Greene.¹
 Ogden, R. S. Page.²
 Provo City, Ervin A. Wilson.
 Salt Lake City, J. F. Millsbaugh.

VERMONT.

Barre, Sherman E. Bishop.³
 Brattleboro, Rev. James H. Babbitt.
 Burlington, Henry O. Wheeler.
 Rutland, Edward L. Temple.
 St. Albans, F. H. Dewart.

VIRGINIA.

Alexandria, Richard L. Carne.
 Charlottesville, F. W. Lane.
 Danville, John A. Herndon.
 Fredericksburg, E. M. Crutchfield.
 Lynchburg, E. C. Glass.
 Manchester, A. H. Fitzgerald.³
 Newport News, J. H. Crafford.⁴
 Norfolk, K. C. Murray.
 Petersburg, D. M. Brown.
 Portsmouth, John C. Ashton.
 Richmond, William F. Fox.
 Roanoke, Rush U. Derr.
 Staunton, W. W. Robertson.
 Winchester, Maurice M. Lynch.

WASHINGTON.

Fairhaven, C. W. Albright.
 New Whatcom, G. B. Johnson.
 Olympia, B. M. Brinthall.

Port Townsend, W. F. Babcock.³
 Seattle, Frank J. Barnard.
 Spokane Falls, D. Bemiss.
 Tacoma, Franklin B. Gault.⁵
 Walla Walla, R. C. Kerr.

WEST VIRGINIA.

Charlestown, George S. Laidley.
 Huntington, James M. Lee.
 Martinsburg, J. A. Cox.
 Parkersburg, W. M. Straus.
 Wheeling, W. H. Anderson.

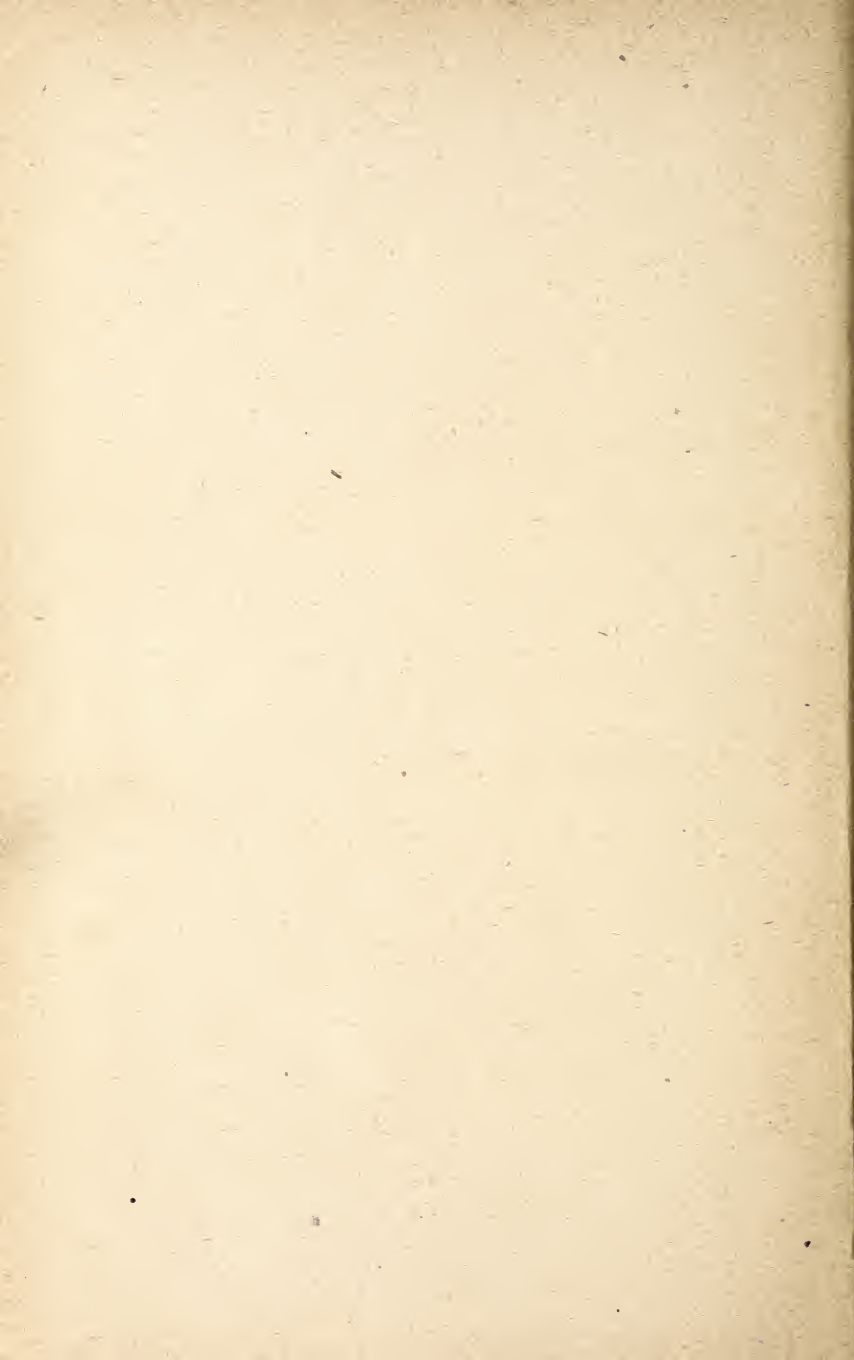
WISCONSIN.

Antigo, W. H. Williams.
 Appleton, I. N. Stewart.
 Ashland, J. M. Turner.
 Baraboo, E. C. Wiswall.
 Beaver Dam, James J. Dick.
 Beloit, C. W. Merriman.
 Berlin, Perry Niskern.
 Chippewa Falls, Clarence M. Bontelle.³
 Eau Claire, J. K. McGregor.
 Fond du Lac, I. N. Mitchell.
 Fort Howard, C. W. Lomas.
 Green Bay, John A. Hancock.
 Janesville, F. W. Cooley.
 Kaukauna, J. F. Conant.³
 Kenosha, D. A. Mahoney.
 La Crosse, Albert Hardy.
 Madison, R. B. Dudgeon.
 Manitowoc, C. Friedel.
 Marinette, J. F. Powell.
 Menasha, G. W. Dodge.
 Menominee, Judson E. Hoyt.
 Merrill, J. J. Hoffman.
 Milwaukee, George W. Peckham.
 Neenah, J. N. Stone.
 Oconto, Elmer E. Carr.³
 Oshkosh, Rufus H. Halsey.
 Portage, A. C. Kellogg.
 Racine, O. C. Seelye.
 Sheboygan, George Heller.
 Stevens Point, Henry A. Simonds.
 Superior, A. W. Rankin.
 Watertown, C. F. Viebahn.
 Waukesha, George H. Reed.
 Wausau, Karl Mathie.³
 Whitewater, C. H. Sylvester.

WYOMING.

Cheyenne, James O. Churchill.
 Laramie, F. W. Lee.

¹ County superintendent.² Supervising principal.³ Principal.⁴ County superintendent; post-office, Lee Hall.⁵ Resigned; name of successor not reported.



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